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Jersey Lily Turnip.
Maltese Parsnip.
Giant Rocca Onion.
Solid Ivory Celery.
Mont Blanc Cauliflower.
Perfection Beet.
Long Red Carrot.
Model Leek.
Perfection Brussels Sprouts

# ENGLISH

# VEGETABLES & FLOWERS

IN

# INDIA & CEYLON.

*WITH USEFUL NOTES ON*

ROSES, BULBS, FRUIT TREES, AND LAWNS.

FOR AMATEUR GARDENERS.

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*COMPILED FROM AUTHENTIC SOURCES*

BY

DONALD McDONALD,

ASSOCIATE OF THE ROYAL HORTICULTURAL SOCIETY.

SECOND EDITION,

Carefully Revised and Profusely Illustrated.

7x 1-34

LONDON:

JOHN HADDON & CO., 3, BOUVERIE STREET, FLEET STREET;

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## PREFACE TO THE FIRST EDITION.

THERE is a demand for a handy book on the cultivation of English Vegetables and Flowers in India and Ceylon, and my aim in compiling this treatise is directed to those who find it necessary, through business or other occupation, military and civil, to make our great Eastern possessions their home for a period extending, more or less, over a number of years, and are desirous, so far as is possible, to cultivate Vegetables, Flowers, Bulbs, Roses, and Fruits, as had been their custom in England. The Book is also intended to be of service to those Natives whose education to British ways has led them to be interested in the subject.

It is not pretended that the information shall be in any way as comprehensive or exhaustive as Firminger's volume on Gardening in Northern India, to which I am indebted for many opportune hints, yet I maintain my instructions are sufficiently expressive to enable cultivators to produce good results from an operation beset with difficulties, arising from uncertainty of climate, ravages of birds and insects, and "the superstitious native gardener."

I trust my endeavours to construct the material parts upon concise and simple lines will prove useful and meet with approbation, the end I have in view will then be attained.

---

## PREFACE TO THE SECOND EDITION.

IT is gratifying to announce that within six months of its introduction into India, the first print of any little handbook should have been disposed of so rapidly.

I was convinced that a manual conveying useful information to the amateur cultivator in a popular form would find a ready sale, and my surmise in this respect has been fully realized.

The present issue has been carefully revised, and my best thanks are due to Sir George Birdwood, the eminent Anglo-Indian Authority, who has been graciously pleased to contribute a valuable chapter that will be of great interest to residents, particularly in the Bombay Presidency, and also to Messrs. James Carter and Co., the well-known seedsmen, for the majority of the illustrations.

D. McD.

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# INTRODUCTION.

SHOULD a history ever be written of the commercial progress made in Great Britain and her Dependencies during the fifty years of Her Majesty's reign, not the least important subject with which writers will have to deal will be the marvellous development of Horticulture in all its branches.

India is in no way behind in these matters, but concurrently with our advance at Home, there is a great desire from all parts for a knowledge in the art of Gardening. The policy of the British Government in India has necessarily been to diffuse a thorough grasp of the English language throughout the land, and the result is, the intelligent Indian has become very highly educated, and increasing numbers now study at our great Universities in England, taking high honours every year, and they return home to engage in various professions, the consequence of this being the pleasing characteristic of an increasing disposition to render the surroundings of their bungalow or other dwellings cheerful with English Flowers and Plants. This is not the outburst of mere fashion, only likely to predominate for a time, but is without doubt the steady progressive growth of a fixed idea, gathered during their sojourn in England, that flowers, like sunshine, are essential to domestic enjoyment and human happiness.

These remarks do not apply alone to those who seek their education in England, as statistics tell us that during the five years ending 1889 the number of public schools and other seminaries of learning, together with the various Agricultural and Horticultural Societies in India reached 175,000 with an average daily attendance of over 3,000,000 students. Such an important indication must show us that "they, too, are becoming a people trained by ourselves to follow our acts and adopt that new national life that we ourselves have called into being." Some day, probably, the rudiments of Gardening will form a section of the teaching in these great Indian schools.

Whatever may be the future of crowds of the natives of India, it is certain if their more fortunate brethren will interest them ever so little in the cultivation of Vegetables and Flowers, it may be the means of scattering a refining influence over their lives; but the question has another important aspect, for it is preposterous to suppose that, in a busy country like India, with its constantly-increasing population, the land will be allowed to continue to be crudely cultivated as it is at present in many parts.

Sir James Caird—who, it will be remembered, was sent to India by the Government as a member of the Indian Famine Commission—in his book on India, published in 1884, wrote:—"There are extensive areas of good useful land covered with jungle in various parts of the country, which might be reclaimed and rendered suitable for cultivation. The produce of the country, on an average, is barely sufficient to maintain the present population, and make a saving for an occasional famine."

I say candidly, there is no pleasure so elevating or so lasting in its influences as the art of Gardening, and nothing can be more delightful to a mind educated to it than the sweetness and brightness of Flowers; and the great fact must be acknowledged that Vegetables, Flowers and Fruits have come already to be regarded as necessaries of life, even in India. Many of our thousands of soldiers stationed at the military cantonments are deeply interested in the subject, and take as great pride in their Indian Bagh as they do in their allotment at Home. Officers of the army, too, Government Officials, Tea, Coffee, Rice, Indigo and Tobacco Planters, the Great State Railway and other Companies, all help in bringing this occupation directly before masses of the subjects of our great Indian Empire.

In almost every town where there is a semblance of a European population, or garrison, there are ornamental parks and gardens.

The primary objects of the great Botanical and other Gardens of Calcutta, Allahabad, Quetta, Lahore, Mooltan, Jhansi, Gonda, Benares, Etawah, Saharunpore, Nagpore, Poona, Bombay, Kandesh, and Berar, Madras, Bangalore, Mysore, with Peradeniya, Nuwera Eliya, Kandy, Colombo in Ceylon, and many others, are to disseminate useful information respecting Vegetable products that cannot be over estimated, but the constitution of the great Government institutions is generally based upon such scientific principles that their operations in testing the climatic differences of the various Provinces, the kinds of plants that may be profitably cultivated within their own centres of activity, the trials in the acclimatization of useful and ornamental plants, although evidently of great advantage, are mostly beyond the scope of the great majority of Amateur Gardeners. Then there are extensive and costly gardens belonging to the native princes and nobles, all having a practical aim, prominent among which may be named H.M. The Nizam of Hyderabad's beautifully kept grounds at Chudderghaut, and the Gaekwar's new Estate at Baroda.

Phil Robinson gives the following dainty description of his Indian Garden:—"A gallery of curiosities for the indifferent to admire, the interested to study; a Parliament full of busy life for those who have the will to learn of the curious humanity of beasts, birds, and little insects. Here in a green colonnade stand the mysterious broad-leaved plantains with their strange spikes of fruit—there the dark mango. In a grove together the spare-leaved peepul, that sacred yet treacherous tree, that drags down the humble shrine over which it was placed to sanctify; a shapely tamarind with its clouds of foliage; the graceful neem; the fabulous teak with its great leathern leaves; and the bamboos the tree-cat loves. Below them a wealth of roses, the lavender-blossomed durantas, the cactus, grotesque in growth, the poinsettia with its stars of scarlet, the sick scented jessamine, and the quaint coral trees; while over all shoots up the palm. The citron, lime and orange trees are beautiful alike when they load the air with the perfume of their waxen flowers, or when they are snowing their sweet petals about them, or when heavily fruited they trail their burdened branches to rest their yellow treasure on the ground."

# NOTES ON FLOWER GARDENING IN BOMBAY.

By SIR GEORGE C. M. BIRDWOOD, K.C.I.E., C.S.I., M.D., LL.D.

What at once struck me on returning to India, in 1854-5, after twenty-one years absence, was the large proportion of foreign flowers in the gardens at Bombay. It was a disappointment, for I was already familiar with the most of them in our hot houses here; and it was not until I visited the Khandalla and Ram Ghats, that I experienced the pleasure of seeing the glorious indigenous flowers of the old Presidency in their native localities. In after years, when Secretary to the Agri-Horticultural Society of Western India, I introduced them all into garden cultivation, and with the greatest success, financial as well as horticultural. Before my time the Society had wasted its means and energy in vain attempts to import the favourite flowers of our English gardens into every cantonment of Western India, to the complete neglect of the local flora; and so eager are Englishmen in India to surround themselves with the plants associated with the memories of their early homes, that I have known young officers over and over again bid a sum of money amounting to a month's and even two months' pay to secure a seedling oak, or a yard or so of growing ivy. It is a pleasant trait of human character, and one we share with the Parsees, the Portuguese, and the Hindoos also, and if ruinous to individuals, it has in the course of 200 years naturalised in India a countless number of the most useful exotic fruits, and grains, and vegetables, and the most decorative exotic flowering trees, and shrubs, and herbaceous perennials, and annuals. I have to deal here only with the latter classes of plants. Fryer, writing in 1698, tells us that at that date there was no great variety of flowers in the gardens of the rich in India: "*Jessamins*," the "Tree *Mallow*" [*Hibiscus Rosa-mutabilis*], "some few *Lysimachias*," "*Bismalvas* and some Wall-flowers or *Stock-Gillyflowers* being the height of which they aim at." He mentions also the "Silk Cotton Tree," and "a Tree called *Arbor-tristis*" [*Nyctanthes Arbor-tristis*]. These are "all the choice." He adds:—"Roses would grow here if they would but cultivate them." Now Western India [illegible] as well in Parsee and Hindoo as in English gardens, "a wilderness of roses;" and it would take up far too much space to name all the other exotics from the West Indies and Mexico, from South America, from the Mediterranean Countries, including Arabia and Persia, from Africa, from the Indian Archipelago, and China and Japan, and from Australia, that have since the time of Fryer gradually become thoroughly naturalised in Western India. I will content myself with naming only the principal, under the foregoing geographical heads.

## A. West Indian and Mexican Plants.

*Argemone mexicana*, become wild; *Tagetes patula*, and *T. erecta*, *Stachytarpheta jamaicensis*, *Canna discolor*, *Asclepias curassavica*, *Gaillardia bicolor*, *Corcopsis tinctoria*

*Amaryllis equestris*, *Martynia diandra* become wild; *Yucca gloriosa*, *Salvia splendens*, *Russellia juncea* and *R. floribunda* *Euphorbia splendens*, *Zephyranthes rosea*, *Dahlia* species, *Tecoma radicans*, *Bixa Orellana*, *Malpighia coccifera*, *Poinciana pulcherrima*, *Petrea volubilis*, *Poinsettia pulcherrima*, and *Parkinsonia aculeata*, become wild.

### B. South American Plants.

*Tithonia tagetifolia*, *Salvia coccinea*, *Stachytarpheta mutabilis*, *Petunia* sp., *Gesnera tuberosa*, *Achimenes* sp., *Zinnia elegans*; *Turnera ulmifolia* become wild; *Helianthus tuberosus*, *Quamoclit vulgaris*, *Canna Indica*, *Lantana* sps., become wild; *Passiflora* sps., *Gerbera Thevetia* become wild; *Allamanda cathartica*, *Bignonia stans*, and *B. venusta*, *Duranta Ellisi*, *D. Plumieri*, and *Bougainvillæa spectabilis*.

### C. Plants of the Mediterranean Countries.

Of these only the Rose has been largely introduced since the Portuguese found the sea-way, by the Cape of Good Hope, to the East; and most of the Mediterranean plants naturalised in India were introduced there by the Arabs before its discovery by Da-Gama. They are *Papaver somniferum*, *Linum usitatissimum*, *Jasminum odoratissimum*, *Jasminum Sambac*, *Carthamus tinctorius*, *Hemerocallis fulva*, *Myrtus communis*, *Punica granatum*, *Nyctanthes Arbor-tristis*, *Vachellia Farnesiana*, and *Sesbania Ægyptica*.

### D. African Plants.

*Pelargonium* sp., *Plumbago Capensis*, *Thunbergia alata*, *Virgilia Capensis*, *Hibiscus liliflorus*, *Abutilon striatum*, *Malva mauritiana*, *Urania speciosa*, and *Poinciana regia*.

### E. Plants from Further India, the Indian Archipelago, and "Higher India," *i.e.*, China with Japan.

*Plumbago rosea*, *Quamoclit phœnicia*, *Alpinia nutans*, *Polianthes tuberosa*, *Ruellia infundibuliformis*, *Dracæna* sp., *Artobotrys odoratissima*, *Hibiscus Rosa-mutabilis*, and *H. sinesisis*, *Lagerstræmia indica*, *Quisqualis indica*, *Thespesia populnea*, *Agati grandiflora*, *Hisonia aculeata*, and *Canna florida*. Some of these plants were either introduced, before the time of the Portuguese, by the Arabs, and some in more recent years by the Parsees.

### F. From Australia.

Tecoma jasminoides.

I have left out all ornamental leaved trees from the list, such as the Australian *Casuarinas*, and the American Logwood and Mahogany trees, as well as all fruit-trees and vegetable and other economic plants without showy flowers. But it is the fact that most of the staple cereal and pulse grains, oilseeds, dyeing plants, and fruit trees of India, are of foreign origin, and that very many of them were introduced by the Portuguese. They constitute the permanent endowment of the people of India by their Portuguese conquerors, and this should always be remembered to the credit of the latter.

The exotic plants successfully introduced by the Agri-Horticultural Society of Western India during the years that I held the Secretaryship included *Amaryllis formosissima*, *Eucharis amazonica*, *Calathea zebrina*, *Caladium*

*bicolor*, *C. Wightii*, and other showy Caladiums, all sorts of tropical orchids, Indian and American, *Catesbea spinosa*, *Clerodendron Thomsonæ*, *Hemimeris coccinea*, *Jacquinia ruscifolia*, *Poinciana Gillesii*, *P. Playfairii* from Aden, *Hæmanthus coccineus* from Zanzibar, and *Poivrea purpurea* from the Mauritius, and *Stephanotis floribunda* from Madagascar, both presented by the late Honourable Rustumjee Jamsetjee Jejeebhoy, and *Paulownia imperialis* from Japan. The following flowers, jungle trees, shrubs, and creepers were also very profusely cultivated, viz. :—

*Clematis triloba*, *Crateva Roxburghii*, *Capparis Murrayana*, *Helicteres Isora*, *Erinocarpus Nimmonii*, *Mesua ferrea*, *Calophyllum Inophyllum*, *Calysaccion longifolium*, *Hyptage Madablota*, *Ochna nana*, *Clitoria ternatea* *Erythrina* sps., *Butea* sps., *Wagatea spicata*, *Cassia fistula*, *Jonesia Asoca*, *Buchanania* sps., *Acacia* sps., *Albizzia* sps., *Melastoma Malabarica*, *Grislea tomentosa*, *Lagerstræmia reginæ*, *Ixora coccinea*, *Mussænda frondosa*, *Gardenia lucida*, *Tabernæmontana coronaria* *Wightia tinctoria*, *Hoya viridiflora*, *Gmelina arborea*, *Vitex trifolia* and many others.

There is a great lack of blue flowering plants in Indian gardens, and I always kept in stock large quantities of the following :—

*Plumbago Capensis*, *Ruellia zeylanica*, *Barleria cristata*, *Crotalaria retusa*, *Linum usitatissimum*, *Clitoria ternatea*, the *Jacquemontia convolvulus*, with small blue unfading flowers, *Browallia alata*, *Achimenes* sp., *Gomphrena globosa*, *Cleome speciosissima*, *Solanum trilobatum*, *Stachytarpheta jamaicensis*, *Angelonia salicariæfolia*, and latterly *Meyenia erecta*, received from Dr. Thwaites in Ceylon.

Of annuals and perennials raised from seed, the following I found hardy, viz. :—

*Gomphrena globosa*, *Petunia* sp., *Cereopsis tinctoria*, *Pelargonium* sps., *Chrysanthemum indicum*, *Zinnia elegans*, *Tagetes* sps., *Celosia* sps., *Cleome speciosissima*, *Balsams*, *Achimenes*, *Salvia splendens*, *Pentas carnea*, *Gaillardia bicolor*, *Tithonia tagetifolia*, *Browallia alata*, and *Salvia coccinea*.

The following I found delicate, viz. :—

*Portulacca* sp., *Cuphea* sp., *Verbena* sp., Common Marigold, Snapdragon, Daisy, Forget-me-not, *Lobelia* sp., Dandelion, Stock, *Cineraria* sp., Violet, Heartsease, Wallflowers, Hollyhock, *Phlox* sp., *Cobea scandens*, German Asters, Sweet William, Mignonette, Sweet Peas, and Heliotrope.

The following were precarious, viz. :—

China Asters, *Calceolaria* sp., *Salvia patens*, *Delphinium* sp., *Centaurea Cyanus*, and *Helichrysum bicolor*.

It was the seeds of these delicate and precarious plants that were always in the widest and greatest demand.

In conclusion, I may refer to an excellent article by my brother, Mr. Justice Birdwood, of the High Court, Bombay, on "Bombay Gardens, Past and Present," in Miss Manning's *Indian Magazine* for January, 1890.

GEORGE BIRDWOOD.

# A TABLE SHOWING SUITABLE MONTHS TO SOW

**IMPORTANT NOTICE.**—As it is impossible to arrange an exact Table to meet an ever-varying Climate, t
actual experience of the locality. The figures refer to the months in which the seed may be sow

| Varieties marked thus * can be cultivated in the Plains; those not marked, although they can be tried, thrive best at higher elevations. All will grow in the Hills. | JANUARY. | | | | | | FEBRUARY. | | | | | | MARCH. | | | | | | APRIL. | | | | | | MAY. | | | | | | JUNE. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Lucknow. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Poonah & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. |
| Artichoke, Globe | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Artichoke, Jerusalem | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 |
| Asparagus | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Beans, Broad | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Beans, Kidney or Fch. | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Beans, Runner | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Beet | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Borecole or Kale | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Broccoli | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Brussels Sprouts | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cabbage and Savoy | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Cardoon | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Capsicum | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Carrot | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cauliflower | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Celery | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Cress | 1 | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Coleworts | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 |
| Cucumber | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 |
| Dandelion | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Egg Plant | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | 1 | 1 |
| Endive | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Fennel | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Gourds | ... | ... | 1 | ... | ... | 1 | ... | 1 | 1 | ... | ... | 1 | 1 | ... | ... | ... | 1 | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | 1 | 1 | 1 | 1 |
| Garlic | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Herbs | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Horse Radish | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Knol Khol or Kohl Rabi | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... |
| Leek | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lettuce, Cos | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lettuce, Cabbage | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Maize | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... |
| Melon | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | 1 | 1 | 1 | ... | ... | ... | 1 | ... | 1 | 1 | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Mustard | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Mushroom | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Onion | ... | ... | 1 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Parsley | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Parsnip | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Peas, early | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Peas, Summer | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... |
| Peas, Late | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Pepper | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Potatoes | 1 | 1 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... |
| Radish | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Rhubarb | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Salsify | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Scorzonera | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Sage | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Soakale | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Shallots | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Spinach | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Sorrel | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Squash | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tomato | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | ... |
| Turnip, White | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Turnip, Yellow | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Vegetable Marrow | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Watercress | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |

# ND PLANT ENGLISH VEGETABLES IN THE PLAINS.

ughtful gardener must conduct his operations in accordance with conditions that are only observable by favourable situations on the Plains and lower levels of the Table lands.

| JULY. | | | | | AUGUST. | | | | | SEPTEMBER. | | | | | OCTOBER. | | | | | NOVEMBER. | | | | | DECEMBER. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Punjaub. | N.W.P. & Oudh. | Bengal. | Cent. & W. Prov. | Bombay & Deccan. | Madras, Mysore. | Varieties marked thus should be soaked for several hours before sowing. The lighter and smaller seed may be put in a fine bag, dipped in water and mixed with sand before sowing. |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 1 | 1 | ... | ... | 1 | 1 | 1 | 1 | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | †Artichoke, Globe. |
| ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | Artichoke, Jerusalem. |
| ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | ... | †Asparagus. |
| ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | †Beans, Broad. |
| ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | †Beans, Kidney or Fch |
| ... | ... | ... | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | †Beans, Runner. |
| ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | †Beet. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Borecole or Kale. |
| ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Broccoli. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Brussels Sprouts. |
| ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | †Cabbage and Savoy. |
| 1 | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Cardoon. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Capsicum. |
| ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | 1 | 1 | 1 | 1 | ... | †Carrot. |
| 1 | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | †Cauliflower. |
| ... | ... | ... | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | †Celery. |
| ... | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | †Cress. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Coleworts. |
| 1 | 1 | 1 | 1 | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | †Cucumber. |
| ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Dandelion. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | †Egg Plant. |
| 1 | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | 1 | 1 | 1 | ... | 1 | ... | ... | 1 | Endive. |
| ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | Fennel. |
| ... | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | †Gourds. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | Garlic. |
| ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | Herbs. |
| 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | Horse Radish. |
| ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | †Kohl Rabi or Knol Khol |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | †Leek. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | Lettuce, Cos. |
| ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | ... | Lettuce, Cabbage. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Maize. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Melon. |
| ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | 1 | 1 | 1 | ... | ... | ... | †Mustard. |
| ... | ... | ... | ... | 1 | 1 | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | ... | Mushroom. |
| ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | †Onion. |
| ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | †Parsley. |
| ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... | ... | ... | †Parsnip. |
| ... | ... | ... | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | †Peas, Early. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | †Peas, Summer. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | †Peas, Late. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Pepper. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | 1 | Potatoes. |
| 1 | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | 1 | †Radish. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | Rhubarb. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | †Salsafy. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | †Scorzonera. |
| ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | Sage. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | †Seakale. |
| ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | Shallots. |
| ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | ... | 1 | ... | ... | 1 | 1 | 1 | 1 | ... | ... | ... | ... | 1 | 1 | †Spinach. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 1 | 1 | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | Thyme. |
| 1 | 1 | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | ... | 1 | ... | 1 | 1 | 1 | 1 | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... | ... | 1 | 1 | †Tomato. |
| 1 | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | 1 | 1 | 1 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | Turnips, White. |
| ... | ... | ... | ... | 1 | ... | 1 | ... | 1 | ... | ... | 1 | 1 | ... | 1 | 1 | ... | 1 | ... | 1 | 1 | 1 | 1 | 1 | ... | ... | ... | ... | ... | Turnips, Yellow. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | Vegetable Marrow. |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 | ... | †Watercress. |

# MONTHLY REMINDERS.

IMPORTANT NOTICE.—As the Seasons in the Plains, from North to South, vary so considerably, it is impossible to set out an exact Table of Instructions. It is, therefore, recommended that operations be conducted to suit the peculiarities of districts influenced by uncertain climatic changes.

The directions under the heading of Northern India include the lower levels of the Punjaub, the North-West Provinces and Upper Bengal; those under Central India include Lower Bengal, the Central and Western Provinces; Southern India includes Mysore and Madras. Separate references are made to the Hill Stations, and also to Ceylon. (*See* pages 31 and 32.)

## JANUARY IN THE VEGETABLE GARDEN.

**Northern India.**—Make sowings according to the Tables on pages 12 and 13. Transplant all that require it, protect from likely frosts all tender plants; if the weather is dry do all watering early in the day.

**Central India.**—Sowings can still be made according to the Tables on pages 12 and 13. Earth up Celery and Lettuce to assist the blanching, water freely in the morning or evening, and let nothing suffer in this respect.

**Southern India.**—Further than putting in a few salads, and chance crops, nothing much can be done in the sowing way; earth up and tie Celery and Lettuce, and keep weeds down. Water well, giving weak liquid manure to vegetables.

## JANUARY IN THE FLOWER GARDEN.

**Northern India.**—A quiet month as regards work. See that all tender Flowers in bloom are protected from cold at night. They should be at their best this month.

**Central India.**—Plant carefully all English Flowers that may be ready as far as possible, following the directions given on page 33; shade from full strength of the sun, and do all watering in the evening.

**Southern India.**—English Flowers should now be showing some beauty. Pick the blooms off as they fade, stake and tie up such plants as require it, keep everything clean and in order, and water only in the evening.

## FEBRUARY IN THE VEGETABLE GARDEN.

**Northern India.**—Make further sowings and transplantings and earth up such plants as are ready, water freely and loosen the surface of the soil. Protect Vegetables at night if frosts abound.

**Central India.**—Further sowings of quick-growing salad plants and Cucumbers can still be made, keeping everything well watered.

**Southern India.**—Make further sowings of salads, collect all refuse and place with such material, as decayed leaves, in some out of the way place to make manure for future use; water it well to encourage decomposition.

## FEBRUARY IN THE FLOWER GARDEN.

**Northern India.**—Make sowings of such Flowers as Petunia, Verbena, Salpiglossis, Portulaça, Phlox, Calliopsis, Dianthus, for blooming in the hot season, in boxes under shelter. If successful they will be pretty.

**Central India.**—Continue to put out seedlings, look to the eradication of weeds, and give plenty of water and shade.

**Southern India.**—See to watering and shading from the rays of the sun in the middle of the day, cut away all blooms as they fade, as the formation of seed-pods spoils the plants for decorative purposes.

## MARCH IN THE VEGETABLE GARDEN.

**Northern India.**—Sow, as shown in Table on page 12, and transplant, keep the ground clean.

**Central India.**—Lift from the ground such roots as Beet, Carrot, and Parsnip, and store in some out of the way place that is fairly dry, a dark shed is preferable. A good plan is to bury them in pure sand or some such material. Onions also must be lifted and placed on airy shelves, gather herbs and dry for use later on. Cabbages and other green stuff from which the heads have been cut, will, if well watered, throw out some tender and useful sprouts.

**Southern India.**—The great heat generally prevailing at this season prevents much sowing or planting being done, therefore pay attention to trenching, digging, and ridging up ground. In commencing to subsoil or trench a piece of ground, let an opening be formed, of two feet or twenty inches in breadth, to the full depth of the surface or active soil, and the entire length of the bed, and let the stuff be removed and left at the opposite side, in order to have it to fill up the last opening, when the ground or bed will have been entirely

turned over. Let the subsoil, to the depth of a foot or fifteen inches, be loosened and well broken, with a pick or spade; but let none of it *now* be brought to the surface. A second trench must now be marked out, the same breadth as the first, and the surface sod of it turned over on the broken subsoil (upside down), and finished off in the form of a small ridge or drill. The subsoil in the second opening is now loosened and broken as the first, and a third line or opening marked out, the surface sod of which is turned over on the broken subsoil of the second, and finished off in the form of a drill, like the first, and so on to the end. The ground can be manured as the work is being carried on; but the manure should not be laid on the bottom, nor on the surface, but in the middle of the drill, between the first and second spits, or between the digging and shovelling. Ridged up or drilled in this form, let it remain to pulverize, and there will be very little trouble in levelling it down for cropping in the proper season. At each succeeding digging a portion of the broken subsoil should be turned up, and well incorporated with the surface soil; and by repeated digging, and taking up the subsoil in regulated proportions (not more than an inch or two of it at a time), the texture of the entire mass will be changed from a poor sterile, to a rich, fertile soil. This is the true method of deepening and enriching the soil, which, with effectual drainage, is certainly the best preparation to ensure good crops in the garden; and should be attentively studied and industriously persevered in.

## MARCH IN THE FLOWER GARDEN.

**Northern India.**—Make successional sowings as mentioned last month, and plant out those that are ready if weather is favourable.

**Central India.**—Take up all tuberous-rooted plants that have passed their beauty for the season as soon as the growth has died down, store them in dry soil in a cool place. Such flowers as look as though they would survive the hot and rainy season, should be carefully taken up and potted and placed under cover as they will become serviceable later on. See well to watering.

**Southern India.**—The same instructions are applicable here.

## APRIL IN THE VEGETABLE GARDEN.

**Northern India.**—*See* Table on page 12. Sow and transplant, earth up and water freely.

**Central India.**—A quiet month so far as English Vegetable culture is concerned. See that a Seed Catalogue is at hand to assist in making out a list of requirements from England next season, unless customary to procure supplies from local sources.

**Southern India.**—Continue trenching, digging, and ridging up every vacant piece of ground. The operation of fallowing during the hot season is of more importance to the Indian Garden than all the fertilizers that can be given, at the same time attend to the collection of manure at all convenient opportunities. A few Cucumbers and Melons may be sown. See they are shaded from the sun until they get thoroughly established.

## APRIL IN THE FLOWER GARDEN.

**Northern India.**—Water everything freely in the evening if the weather be fine and dry.

**Central India.**—Little can be done this month. Keep the surface of the soil loosened and free from weeds.

**Southern India.**—Follow up the directions given for last month.

## MAY IN THE VEGETABLE GARDEN.

**Northern India.**—Keep all growing crops clean, with a loose surface to the soil; water freely, if dry, in the evening. Sow as recommended in Table on page 12.

**Central India.**—Another quiet month in this department. A few Salad Plants may be sown in favoured situations. Asparagus should now be in season.

**Southern India.**—The same remarks apply here, nothing can be done but preparations of all kind. Dig, trench, and ridge up, leaving the surface rough. Collect manure, turn over compost heaps, and where necessary drain the soil.

## MAY IN THE FLOWER GARDEN.

**Northern India.**—Sow Balsam, Mimulus, Zinnia for blooming during the rains; water well and keep weeds down and the surface well loosened.

**Central India.**—Continue to prepare for the sowing season; see that plenty of pots or boxes are at hand and soil ready for use; keep it shaded and moist or it will get like dust. Plant out Jerusalem Artichokes. (*See* page 24.)

**Southern India.**—Last month's operations still to be continued. Send orders for Seeds of all kinds to England, unless customary to obtain supplies at home.

## JUNE IN THE VEGETABLE GARDEN.

**Northern India.**—Sow and plant out. All vacant ground must now be worked to the depth of a foot at least; flood if possible and cover again with manure and dig it in, water well again.

**Central India.**—Another quiet month. The intense heat that generally prevails in the Plains at this season is a sufficient excuse to neglect all gardening operations. The enthusiastic cultivator will, however, have an eye to the future, and not allow what may show beauty later on, to be burnt up. If the rains set in see that no stagnant water lays about, as its presence near the roots of vegetables is very prejudicial.

**Southern India.**—A rainy month as a rule, but too early to make important sowings. Still work on the ground, manuring, &c. All Seeds from England should be well on their way to India by this time.

## JUNE IN THE FLOWER GARDEN.

**Northern India.**—All Flowers must be carefully attended to; in trimming, staking, and watering, make another sowing of the common Annuals, they may give good effect after the rains.

**Central India.**—A few more Flower Seeds may be sown during the month, such as Amaranthus, Balsams, Calliopsis, Celosias, Cockscombs, Ipomœas, Tobaccos, Zinnias, &c. If the weather is very unfavourable, leave the operation until early in next month. (*See* pages 33 to 50.)

**Southern India.**—Continue preparations.

## JULY IN THE VEGETABLE GARDEN.

**Northern India.**—Sow out of the wet under cover such Vegetables as are named on page 12; keep all ground well manured, worked, and watered, and mark out the beds for future use, noting the rotation of crops as given on page 62 as far as possible. All beds and rows should be raised above the ordinary level during the rains, so that superfluous water may run away between them.

**Central India.**—Make another sowing of Cucumbers, Early Cabbage, and also Salad Plants of all descriptions; otherwise this month is another quiet one.

**Southern India.**—Level the surface of the ground for sowing such of the new season's Seeds as will be required to put in at the end of the month. A few Peas for early use, like Carters' First Crop, Little Gem, Advancer, and such like, and a little white Celery in boxes under shelter.

## JULY IN THE FLOWER GARDEN.

**Northern India.**—Continue every attention to all bed and border plants, and see that they are kept well watered in the evening if dry. Clean up all beds as the flowers get over.

**Central India.**—Continue sowing more of the Annuals referred to last month, adding Single Dahlia, Convolvulus, Mallow, Castor Oil Plant, Sunflowers, &c.

**Southern India.**—Take out the roots of all Tuberous Plants from their resting place; if they have commenced to start into growth be careful it is not rubbed off; they can be put out during the next week or two. Make a sowing of Balsams. (*See* page 36.)

## AUGUST IN THE VEGETABLE GARDEN.

**Northern India.**—Sow in permanent beds, well shaded from the sun, the Vegetables as recommended in Table 12; plant out any that are ready, giving plenty of shade and water.

**Central India.**—Sow Asparagus Seed and transplant to the new bed when large enough to handle; if sown in the bed in which it is intended to remain, thin out the seedlings to nine inches apart. This is the safest plan to follow in the Plains.

**Southern India.**—All English Seeds should be at hand, and successive sowing of the leading Vegetables made during the month or early in next. (*See* Tables, pages 12 and 13.) As the rains are usually very heavy, care must be taken in the operation to shelter such as are sown in pots or boxes, or they will get washed away; put plenty of cinders or some such material in the bottom, then fill up (with soil already prepared) to within an inch of the surface, press it gently down with some flat article, the bottom of a wineglass will do, then sprinkle the seed thinly —mind this is important—cover it with soil according to its size, say one-sixteenth of an inch deep, water well with a fine rose, then stand under cover on ashes that have been well wetted, cover the whole with a sheet of paper or mat, taking the covering off every evening to be replaced in the morning for the first few days, as soon as the seed comes through it can be dispensed with. It is an advantage to soak all seeds of a hard texture, such as Peas, Beans, &c., in water before sowing; this will help them to germinate quickly. Sow white and crimson Celery in boxes.

## AUGUST IN THE FLOWER GARDEN.

**Northern India.**—Keep Flowers well watered if the rains are not frequent. As all beauty gets past see the ground is well dug, manured, and left loose to sweeten in the sun and air.

**Central India.**—Generally a month of rain. At favourable opportunities the following flowers may be sown:—Cockscomb, Celosia, Ipomœa, Zinnia, &c. (*See* pages 33 to 50.)

**Southern India.** — Make sowings of Asters, Antirrhinum, Calliopsis, Calendula, Cobœa, Convolvulus, Delphinium, Dianthus, Godetia, Hollyhock, Heliotrope, Linum, Lobelia, Marigold, Marvel of Peru, Maurandya, Mignonette, Poppy, Perilla, Petunia, Phlox, Portulaca, Pansy, Stocks, Sweet William, Tropæolum, Wallflower, Whitlavia, and Zinnia. Expose those in pots to the light and air on dull days, but shelter them from rain and strong sunlight. (*See* pages 33 to 50.)

## SEPTEMBER IN THE VEGETABLE GARDEN.

**Northern India.** — Sow all kinds of Vegetables, transplant those that require it, remove others that are ready to the final position, if in rows they should be sunk a few inches below the level and the earth drawn up to them as they mature. Tend carefully to all plants, give water freely in the evening and shade during day if practicable. If kept growing insects will not be much trouble.

**Central India.**—The principal crops are planted this month. (*See* Table, page 12.) Sow Broad Beans, Beet for early use, Broccoli of all sorts, Early Heartwell, Sugarloaf, Mammoth Beefheart, and Prizetaker Cabbages; more Celery, all Salads, Cauliflower, Carrot and Parsnips, Kohl Rabi, Peas, Leeks, Onions, Turnips, Capsicum, prick out early Celery, and put in successional crops generally in raised beds.

**Southern India.**—Continue to sow English Vegetables as referred to for Central India. Sprinkle charcoal, lime, or soot over Seedlings in beds to prevent them being eaten by ants or beetles; if these are not handy, mix some kerosene or paraffin with sand or earth, and sprinkle it about.

## SEPTEMBER IN THE FLOWER GARDEN.

**Northern India.**—Many English Flowers may be sown this month. (*See* pages 33 to 50.)

**Central India.**—Continue to plant English Flower Seeds; towards the end of the month prick out any early-sown kinds that may be ready.

**Southern India.**—Plant out in beds, borders, or under trellis such varieties of early-sown flowers as are ready and make successional sowings.

## OCTOBER IN THE VEGETABLE GARDEN.

**Northern India.**—Sow, prick out, and plant in beds all that are ready; water in the morning and remove all coverings, earth up vegetables that require it.

**Central India.**—This is the height of the sowing season, any of the earlier sown vegetables that are fit to set out can now be arranged. In transplanting vegetables in dry weather, a solution or puddle should be made, consisting of fine mould and cow-dung or mule droppings and ashes, in equal portions, well mixed in water to a creamy consistence. Let the roots be well dipped in this mixture previous to planting them. Have the ground freshly turned over, and as the plants are put in let them be well watered; perform the operation in the evening, and no doubt they will succeed. All the Cabbage and Broccoli tribe answer best in a firm bed, that is to say, the ground should be well trodden down after they are put out, it greatly assists the hearting and to some extent prevents them running to seed. Plant some Potatoes.

**Southern India.**—Transplant as referred to above and make successional sowings weekly. If a period of dryness sets in see everything is well watered, especially the Cabbage family. (*See* page 25.)

## OCTOBER IN THE FLOWER GARDEN.

**Northern India.**—Make sowings in protected places in pots and borders of Flowers as recommended on pages 33 to 50.

**Central India.**—The majority of English Flower Seeds can be sown this month, to constitute, as it were, the main show of bloom. (*See* pages 33 to 50.) Re-pot most plants that are in pots as permanent ornaments.

**Southern India.**—Continue planting out, see to creepers, keep them nicely tied up. Tuberous-rooted plants should now be well advanced; feed them with a little weak manure water and push them along.

## NOVEMBER IN THE VEGETABLE GARDEN.

**Northern India.**—Continue sowing varieties as mentioned in Tables. (*See* pages 12 and 13.)

**Central India.**—Continue transplanting and thinning out such Vegetables as require it. Dig and stir the ground between the lines of growing crops. Earth up Cabbages, and plant successional crops. Stake Peas, earth and top Beans; let this be done when the flowers on the lower parts of the stems begin to wither. The simple process of topping will not only strengthen the plants and increase the size of the pods, but will also bring the crop to maturity much earlier than if the tops had not been cut off. Interline more Peas and Beans between the rows of Cabbage. Earth up early Potatoes, put in more.

**Southern India.**—All transplanting must be completed early this month. Still sow Marrowfat Peas, as Stratagem, Telephone, Ne Plus Ultra, British Queen, Omega. Defiance and Mont Blanc Cauliflowers, if sown during the first part of the month, will give some useful heads in February. Put out Celery in trenches, and sow Salads of all kinds.

## NOVEMBER IN THE FLOWER GARDEN.

**Northern India.**—Protect at night with litter any of the English Flowers likely to suffer from the cold, as sometimes it comes in severe.

**Central India.**—Transplant flowers as fast as they appear ready to their blooming quarters, bearing in mind that the majority of the common annuals do not bear transplanting well. (*See* pages 33 to 50.)

**Southern India.**—Continue to plant out seedlings, any that may be showing the first flowers should be pinched back, to enable the plant to get robust and sturdy in habit. This is material, and will greatly enhance its beauty next month and later.

## DECEMBER IN THE VEGETABLE GARDEN.

**Northern India.**—Sow and plant out, earth up all forward Vegetables, water sparingly, and protect tender plants at night.

**Central India.**—As the different crops get past the useful, they should be removed, and such as are not of a keeping character consumed or disposed of while in their prime, before they spoil. Prepare the ground for succession crops. (*See* Rotation Table, page 59.) Go on interlining till every vacant place is filled; having first properly prepared the ground by digging, trenching and manuring; thin out to their final distances the crops of Swedes, Parsnips, Carrots, and Onions. The lower leaves of forward Swede Turnips and Cabbages may be gathered and given, with the spare thinnings, to animals. They make a most excellent food, upon which all domestic animals thrive and fatten. Fork between all growing crops; attend closely to weeding, see that none ripen their seed, and let the weeds be added to the manure or compost heap; make every exertion to increase the stock of manure, by the addition of ashes, soot, lime rubbish, droppings of animals, soap suds, and all sorts of offal from the bungalow. Water everything that may require it, as it is important the growth should not be checked by drought.

**Southern India.**—The same remarks apply here. The earliest Vegetables should now be coming in. Thin out the leaves of Tomatoes, and expose the fruit to the air and light, but shade from scorching sun.

## DECEMBER IN THE FLOWER GARDEN.

**Northern India.**—Many of the Border Flowers will be showing bloom; see that they are well watered, if dry, early in the day, with weak liquid manure.

**Central India.**—Continue to put out the successional sowings of Flowers. The earliest should retain their beauty to the end of the month. Protect as far as possible from heavy rains, and keep all weeds down. In the North some cold may supervene at night, but it is seldom so severe as to lay great hold upon English Annuals. Many of the kinds intended for pot culture will require repotting this month.

**Southern India.**—It will be useful to continue a sowing of common Flowers, as they may give pleasing effect if anything happen to mar the beauty of those sown earlier. (*See* pages 33 to 50.)

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## AVERAGE SEASONS AT VARIOUS PLACES.

**Akyab**—Dec. to January, cool; Feb. to May, hot and dry; May to October, wet; November, hot.
**Aleppey**—September to June, hot and dry; June to September, S.W. Monsoon, very wet and rough.
**Barwah**—October to April, N.E. Monsoon, cool; May to September, S.W. Monsoon, hot.
**Beypore**—December and January, cool; June to August, S.W. Monsoon.
**Bimlipatam**—January to April, cool; May to December, hot.
**Bombay**—Dec. to Feb., cool; March to June, warm; June to Sept., wet and hot; Oct. & Nov., genial.
**Calcutta**—November to March, cool; April to June, hot; July to November, rains.
**Calicut**—December to January, cool; other months, hot; July and August, rainy.
**Calingapatam**—November to March, cool; April to June, hot; July to October, rain.
**Cannanore**—December to January, cool; May and September, wet; rest hot and dry.
**Carwar**—June to October, rains; other months, hot and dry.
**Chittagong**—Oct. to April, N.E. Monsoon, cool; May to September, S.W. Monsoon, hot and rainy.
**Cochin**—May to August, S.W. Monsoon; October to February, N.E. Monsoon.
**Coconada**—October to April, N.E. Monsoon; May to September, S.W. Monsoon.
**Colachel**—January to May, hot and dry; June to Sept., S.W. Monsoon; Oct. to Nov., N.E. Monsoon.
**Colombo**—June to October, S.W. Monsoon; November to May, N.E. Monsoon.
**Cuttack**—November to March, cool; April to June, hot; July to October, rains.
**False Point**—November to March, cool; April to June, hot; July to November, rains.
**Galle**—June to October, S.W. Monsoon; other months, dry.
**Ganjam**—Nov. to March, N.E. Monsoon, cool; April to June, S.W. Monsoon; July to Nov., rain.
**Gopaulpore**—November to March, cool; April to June, hot; July to November, rains.
**Kurrachee**—March to October, hot and dry; other months, fairly cool.
**Madras**—December to February, cool; March to October, hot and dry; October to December, rains.
**Mangalore**—September to May, dry; June to August, rains.
**Masulipatam**—October to April, cool; May to September, S.W. Monsoon, hot.
**Narrakal**—May to August, S.W. Monsoon; October to February, N.E. Monsoon.
**Negapatam**—November and December, cool; other months, hot.
**Ootacamund**—January to April, dry and hot; May to December, cool and rainy.
**Pondicherry**—December to February, cool; March to October, hot and dry; Oct. to Dec., rains.
**Pooree**—November to February, cool; other months, hot.
**Rangoon**—November to January, cool; Feb. to May, dry and hot; June to Oct., rainy.
**Singapore**—April to October, S.W. Monsoon; November to March, N.E. Monsoon, cool.
**Tellicherry**—June to August, S.W. Monsoon; Sept. to February, genial; March to May, very hot.
**Tuticorin**—November to April, N.E. Monsoon, cool; May to October, S.W. Monsoon, hot and dry.
**Vizagapatam**—April to June, N.E. Monsoon, hot winds; other months, genial.

# ENGLISH VEGETABLES.

## SORTS TO GROW AND QUANTITIES TO SOW.

All seed beds should be sheltered from excessive rain and rough winds. Water well before lifting seedlings for transplanting they will come away more freely, and the rootlets will not get damaged to such an extent as when taken from a dry seed-bed.

For table of sowing seasons in the Plains, see page 12; in the Hills, page 31.

**Artichoke, Globe.**—One ounce of Seed should give about 250 plants; sow one inch deep in a nicely prepared bed of about two square yards; as soon as large enough, transplant out in good soil three feet apart, and water well. Utilize the space between the rows for salads and other dwarf-growing vegetables, as the foliage makes a splendid shade for such plants. The best kinds are the Crown Globe, green or purple.

**Artichoke, Jerusalem.**—Plant the Tubers like potatoes, three inches deep, and two feet apart. Pick off the flowers when in bud to help swell the roots. Can be had from England in January. Store in sand, like Potatoes.

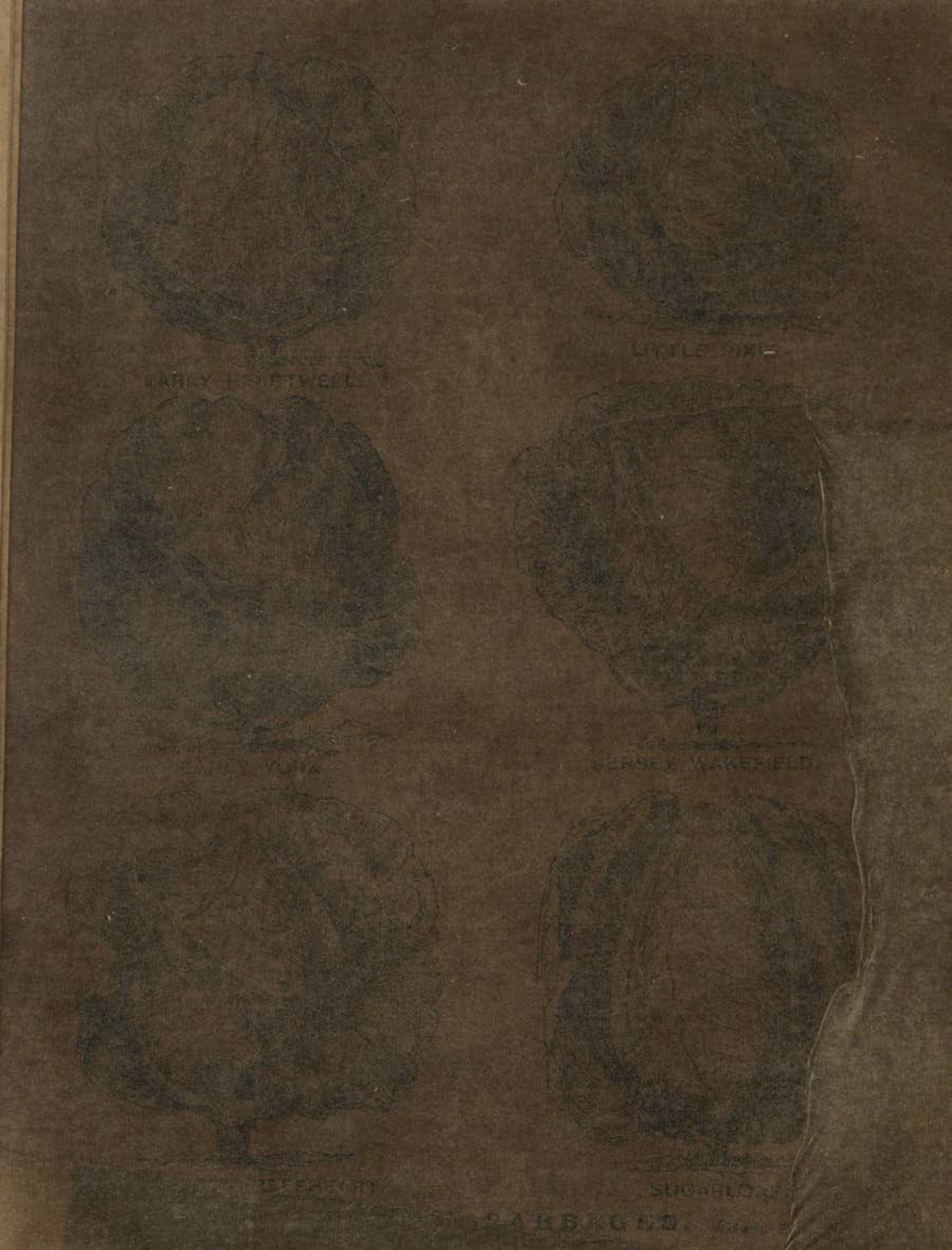
**Asparagus.**—One pint of Seed will sow a line of fifty feet. In the Hills the roots can be transplanted when large enough to a prepared bed, nine inches apart, that has been well supplied with dung. In the Plains transplanting is not recommended, the Seed should be sown on the bed from which the cutting is required. Keep the surface well covered with dung and water often. The bed must be well drained, kept free from weeds, and renewed each season, as the heat causes the plant to develop rapidly, leaving the roots too weak to do much good for a second cutting; being a native of the shore, sea sand forms a valuable stimulant if scattered over the bed, or failing this a few handfuls of salt is an excellent substitute. The best varieties are Giant, Mammoth, or Emperor.

**Beans, Broad.**—One quart will sow a row about fifty feet long. Put in two inches deep and allow three feet between the rows, which space can be utilized for some other dwarf vegetables. Tread the Beans well in, and as soon as they commence to flower stop the top of the growth. Stake if the situation is not sheltered. The best kinds are—For quick use, Early Mazagan, Early Long Pod, Green Long Pod; for main crop, Mammoth, Leviathan, Giant, and Improved Windsor.

**Beans, French or Kidney.**—One quart contains about 300 Beans, and will sow a row about eighty feet long. Put in one and a half inches deep, with two feet space between the rows. They only grow about one foot high, so require little support. In unfavourable localities sow in pots and transplant. The best sorts are—Advancer, Longsword, Canadian Wonder, Sir Joseph Paxton, and Negro Long Podded.

DWARF or FRENCH BEAN

EGYPTIAN
TURNIP-ROOTED BEET


LITTLE PIXIE
HERBERT WAKEFIELD
SUGARLOAF
CABBAGES.

**Beans, Runner.**—One quart contains about 250 Beans, and will sow a row fifty feet long, put in about four inches apart, and if inconvenient to stake them pinch the tops out, and keep them down to one foot high. These Beans can also be planted in pots and transplanted. This system is recommended if the weather is unfavourable. They will climb against any kind of trellis work or cover an arch in a short space of time. The best sorts are the Champion Scarlet Runner, Giant White, Painted Ladies, and the Golden Butter varieties.

**Beet.**—One ounce will sow a row of fifty feet, two feet apart. As soon as large enough thin out to eight inches between each root. The round-rooted sorts answer best in the plains. Popular kinds are Early Crimson Ball, Perfection, Blood Red and Turnip-rooted.

**Borecole.**—*See* Cabbage. Dwarf Curled, Jersey Tree, and Variegated are the best.

**Broccoli.**—*See* Cabbage, only transplant like Cauliflower in a firm and rich soil. Water well. Summer, Champion, Mammoth White, and the White Sprouting are all good, the latter being the easiest grown.

**Brussels Sprouts.**—*See* Cabbage. Perfection and Scotch are the best kinds, the crop, however, is not a satisfactory one in the hot Plains. Cut away the Cabbage-like head, when full grown, to swell the sprouts, and water freely with liquid manure.

**Cabbage and Savoy.**—One ounce will sow a bed four square yards and produce about 1,000 plants. As soon as large enough prick out two inches apart in a shady spot, and when the rains are over transplant finally in rows two feet apart, tread the soil firmly, and keep well watered. These remarks apply to the whole of the tribe. The best varieties for quick use are Early Heartwell Marrow, Early York; for main crop, White Prizetaker, Mammoth Beefheart, Little Pixie, Enfield Market, Nonpariel, Jersey Wakefield, Sugarloaf, Red Pickling, and Drumhead Savoy.

**Cardoon.**—*See* Globe Artichoke, and earth up like Celery.

**Capsicum.**—A packet will give about 250 plants. Sow in a patch and transplant one foot apart, or put in pots. This plant does well in all parts of India, and can be sowed practically at any time and under any conditions.

**Carrot.**—One ounce will sow a row 100 feet long and twelve inches apart; thin out to six inches from plant to plant. Mix the seed with moist sand the day before sowing. The best sorts are Early Summer Favorite, the new Scarlet Perfection, Intermediate, Early Horn, and White Belgian.

**Cauliflower.**—*See* Cabbage. After the first transplanting, it is recommended, as soon as they get established, a further transplanting be made before finally settling them. Each time in a very rich soil, and at an increased distance apart. This system of cultivation encourages the

growth of the flower at the expense of the stem and leaves. The best sorts are Asiatic Mont Blanc, Defiance, Dwarf Mammoth, Early London, and Walcheren.

Celery.—One ounce will produce about 1,000 plants. Sow a portion in a box under cover, and as soon as forward enough to handle prick out in a shady spot three inches apart. Then transplant to a trench, setting the plants twelve inches apart; the trenches should be three feet apart, water well throughout the growth. When earthing up, beat the soil well towards the plant to keep the stems close and dry. The best kinds for flavour are the Dwarf Solid Ivory White, the Incomparable Crimson, and Grove Pink. The Standardbearer is a giant red kind, suitable for soups and flavouring.

Cress.—One ounce will sow fifty feet of drill; it is best, however, cultivated in boxes, the top of the soil being half an inch below the edge of the box, the young Cress can then be cut without difficulty as soon as it gets above the rim. Do not bury the seed, but simply sprinkle a little soil over it, and press it down lightly. Keep damp and shaded from the direct rays of the sun, and it will be ready for use in a few days.

Colewort.—*See* Cabbage.

Cucumber.—The varieties grown outdoors in England perhaps thrive as well as any. Those sorts that find such favour for hothouse cultivation in England will only answer in favourable situations. The Seeds should be sown three in a pot and transplanted to a prepared mound or trench when large enough, keeping them thoroughly watered and well shaded from the sun; they will either trail or climb. The fruits on a trailing plant should be laid on a slate or tile. (*See* also page 58.) To keep away ants and beetles, use the preparation referred to at page 56.

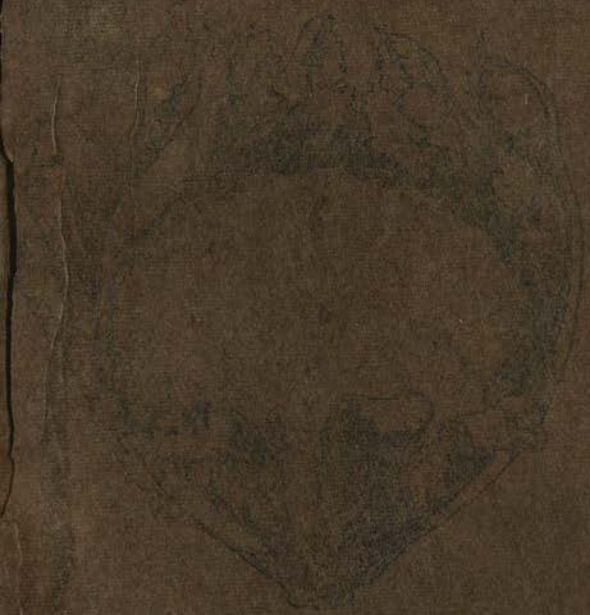
Dandelion.—A useful salad that can be blanched like Seakale. Sow in rows a foot apart, water freely, and thin out to six inches apart. A fine vegetable for those who suffer from liver complaints.

Egg Plant.—One ounce will give 1,000 plants. Sow in a bed and set out when large enough two feet apart, at any season, and water freely if required.

Endive.—One ounce will sow four square yards. Prick out when large enough between the rows of some taller vegetable, this will help to shade it. Eight inches apart will be sufficient. See that the wet does not rot them in the rains. Tye up to blanch when the leaves are dry; then place a flower-pot over a few at a time to assist the blanching. These can be removed occasionally in the early part of the day to dry up the moisture. The best sorts are Model, Moss Curled, White Curled, Green Curled, and Round Leaved.

Fennel.—One packet will give all the plants that are required, and if permitted to seed it will come up again in the same place. Sow in any convenient spot.

BROCCOLI



MONT BLANC CAULIFLOWER.

CHAMPION BROCCOLI.

PURPLE TOP TURNIP

INTERMEDIATE CARROT

HUBBARD SQUASH

ENGLISH TABLE CUCUMBER

**Garlic.**—Plant the Bulbs six inches apart, three inches deep. The sets can be obtained from England in January. Take up and store dry as soon as the growth withers.

**Gourds or Pumpkins.**—One ounce will give about fifty plants. Cultivate like Cucumbers or Melons. This is a favourite and easily grown crop all over India. The fruits of many of the varieties, when ripened off, can be kept several months hung up in a dry place.

**Herbs.**—One packet will produce as many plants as are required. Sow thinly in patches and transplant to any convenient spot. Pull, dry and bottle the leaves as soon as the hot season sets in. Mint grows from roots only.

**Horse Radish.**—Set the crowns twelve inches apart and six below the surface in deeply-dug ground, and lift when the growth reaches the top again. Cut the crown away with one inch of the stem and replant. The sets can be obtained from England any time in winter.

**Knol Khol or Kohl Rabi.**—A vegetable of great importance in India; and cultivated similar to Cabbage. The best sorts are the Green and Purple. It requires a rich soil and plenty of water; in a burning soil it will thrive best if not transplanted.

**Leek.**—One ounce will sow a row 100 feet long, thin out to six inches apart. It is customary in some parts to transplant them into a trench like Celery. When treated this way they should be set nine inches apart and two feet between the rows. The best sorts are Henry's Prize and Musselburgh.

**Lettuce, Cos and Cabbage.**—One ounce will sow a bed six square yards or a line of 150 feet. For forming large heads, the seeds should be sown in a box or shady border, and transplanted carefully 1 foot apart. The Cabbage varieties are the easiest to cultivate, as they do not so readily run to seed in a burning soil. This vegetable delights in plenty of water to induce a quick growth. The best Cos Lettuces are Giant White and Giant Brown. The best Cabbage sorts are Longstander, Tom Thumb, and All the Year Round.

**Maize or Indian Corn.**—Sow in rows two feet apart, with one foot between each grain and two inches deep. The heads make a delicious dish. Stake or tie one plant to another, or they will fall about.

**Melon.**—Sow three seeds in a pot and transplant, without disturbing the roots, to a trench one foot deep, and let the plants creep along the top of the ridge, or they can be planted to climb up a trellis in a shady place. Of the English varieties the best scarlet-flesh is Blenheim Orange, and the best green-flesh, Green gage; but these will only succeed in favoured localities, as their constitution seems hardly strong enough to bear uncertain climatic changes. The Rock and Sweet Persian are the varieties usually grown in India. Do not water while the fruits are ripening or they will burst. (*See* also page 58.)

Mustard.—*See* Cress.

Mushroom.—The dung for making the bed should be obtained fresh from the stable, every morning, if possible, and should not be dried as recommended by some, although, at the same time, it must be protected from too much wet. It should be placed in a shed until there is enough for the bed; then it may be thrown up together in a conical shape, but must not be allowed to heat too much so that the centre becomes dry, but turned every day for a week, more or less, according to the size of the heap. In making the beds, commence with a layer, say a foot in thickness, ram this down firmly, then another layer, making this also firm, continuing until the bed is finished. Very likely the temperature will rise to 120 degrees. When the heat has declined to 70 degrees it is time to see about spawning. The spawn should be broken into pieces about the size of an egg, inserting these half-an-inch below the surface, six inches apart every way. The bed should be well beaten down again after spawning, and the soil placed over two inches thick. This should be pressed down firmly, then give a sprinkling of water and smooth the surface with a spade, if out of doors finish by covering with loose litter or old mats. No more water should be given until the spawn has covered the bed like a cobweb, then a little water at a temperature of 80 degrees. One cake will plant a square yard. This esculent thrives in most parts of India, in the North especially.

Onion.—One ounce will sow a drill 100 feet long; thin the seedlings to six inches apart, some may also be sown in boxes and transplanted, water the seed bed well before lifting them for the operation. The onion is rather a fickle crop; in some places it comes all top, the cause of this is frequently a soft, loose soil; they like a good hard surface, and as soon as they finish swelling, the neck of the growth should be bent down; this will assist in maturing the bulb. Lift and store when ripe. It is as well to put in several sorts as one may suit the locality better than another. The following kinds are quite distinct:—White, Spanish, Bloodred, Silverskin for pickling, Lisbon for pulling young for salads, Giant Yellow Rocca, the Golden Queen, and White Tripoli.

Parsley.—One ounce will sow a row sixty feet long; thin out to four inches apart. If more convenient a bed can be formed a yard or two square. This plant dislikes the hot and rainy seasons, especially if on a burning soil. Do not let it seed, but sow afresh every season. The new Fern-leaf is the most fimbriated and best garnishing variety.

Parsnip.—*See* Carrot. The ground should be well watered after the seed is put in, as this plant has a peculiarity of not germinating in the Indian soils sometimes. It delights in a deeply dug and open situation. Maltese and Hollow Crown are the best varieties.

Peas.—One pint will sow a row thirty feet long. Main crop and later

KOHL-RABI
or
KNOL-KHOL

GIANT
WHITE COS LETTUCE

ALL THE YEAR ROUND
CABBAGE LETTUCE

(see page 17)

FRINGED CABBAGE
LETTUCE

UPRIGHT CABBAGE
LETTUCE

WATERCRESS IN PANS

MUSHROOMS AS GROWN IN THE OPEN IN ENGLAND

varieties require quite double the space. For early use there is nothing better than White First Crop, Blue Peter, Tom Thumb, Advancer, Little Gem, American Wonder: these grow from two to three feet high, and give a crop in about six weeks. For summer crops: White Gem, the fine Stratagem, Telegraph, Surprise, Fillbasket, and Imperial. For autumnal or late crop, come the marrowfats, Dr. M'Lean, Best of All, British Queen, Wonder of the World, and Omega. These are taller than the last section. The Seeds should be set out in a trench about six inches deep, with some rough fibrous material to root into; keep them growing and earth up to the stems as they mature, this will keep them in bearing much longer than is usually the case, unless they show signs of drying up, do not irrigate too freely until after the pods are well set. The rows should vary from two to four feet apart, stakes firmly fixed, or brushwood, should be put to all rows of Peas, owing to the prevalence of so much wind. Shade in the middle of the day if practicable. Dried blood is an excellent manure for swelling the pods for exhibition purposes.

**Pepper.**—*See* Capsicum.

**Potatoes.**—Get the tubers from England, the first lot for early use in the Plains in October, or a month earlier if practicable. For planting in the ordinary seasons in the Hills, February is the best month to have them sent. Put the tubers whole in rows two feet apart, cover four inches deep and one foot apart. Earth up as they grow, and lift when the haulm is quite withered; water sparingly in heavy soils. Can also be produced from seed, but it takes a long time to get tubers large enough for culinary purposes. The best early sorts are Kidney First Crop, Myatt's Ashleaf, River's Ashleaf, Red Russett, King of the Russets (a red-skinned sort, wonderfully disease-resisting), Magnum Bonum, White Elephant, Schoolmaster, Regent, Dalmahoy, Ashtop Fluke, and Carters' Holborn Abundance.

**Radish.**—One ounce will sow a bed three square yards; firmly beat down after sowing, and thin out as required. If possible plant in a shady place and keep well watered. A quick growth prevents them becoming hot and stringy, a covering of loose litter when the sun is powerful will help to keep them cool. The Long Scarlet, Olive-shaped and Round varieties do best. They are fit for gathering within a month from time of sowing in most places.

**Rhubarb.**—One ounce will sow a bed three square yards; transplant to some corner in the garden where they can be covered with a large pot or box for forcing the growth, or if left to grow as nature would guide them, see they are planted in a rich piece of ground, and water well. Does not flourish well on the Plains.

**Salsify and Scorzonera.**—One ounce will sow fifty feet of drill in a trench one foot deep. Thin out to six inches apart, and earth up as the plants mature, or cover with litter.

**Seakale.**—One ounce of seed can be sown in a couple of square yards; transplant when of sufficient size, if they can be kept through the hot season, three to a square foot, and cover with a large pot or box, to blanch the growth, with loose litter outside it. This Vegetable will only thrive in favoured places in the Hills. Roots can be had from England in autumn.

**Shallots.**—*See* Garlic.

**Spinach.**—One packet will sow fifty feet of drill a foot apart; keep it well watered, and gather when young. This plant can be grown nearly all through the year, and is a fine healthy vegetable to eat. The Longstander, Round and Thickleaved are the best varieties.

**Sage.**—One packet will sow four square yards, transplant to one foot apart in a shady spot. Does best in the North, and on the Hills.

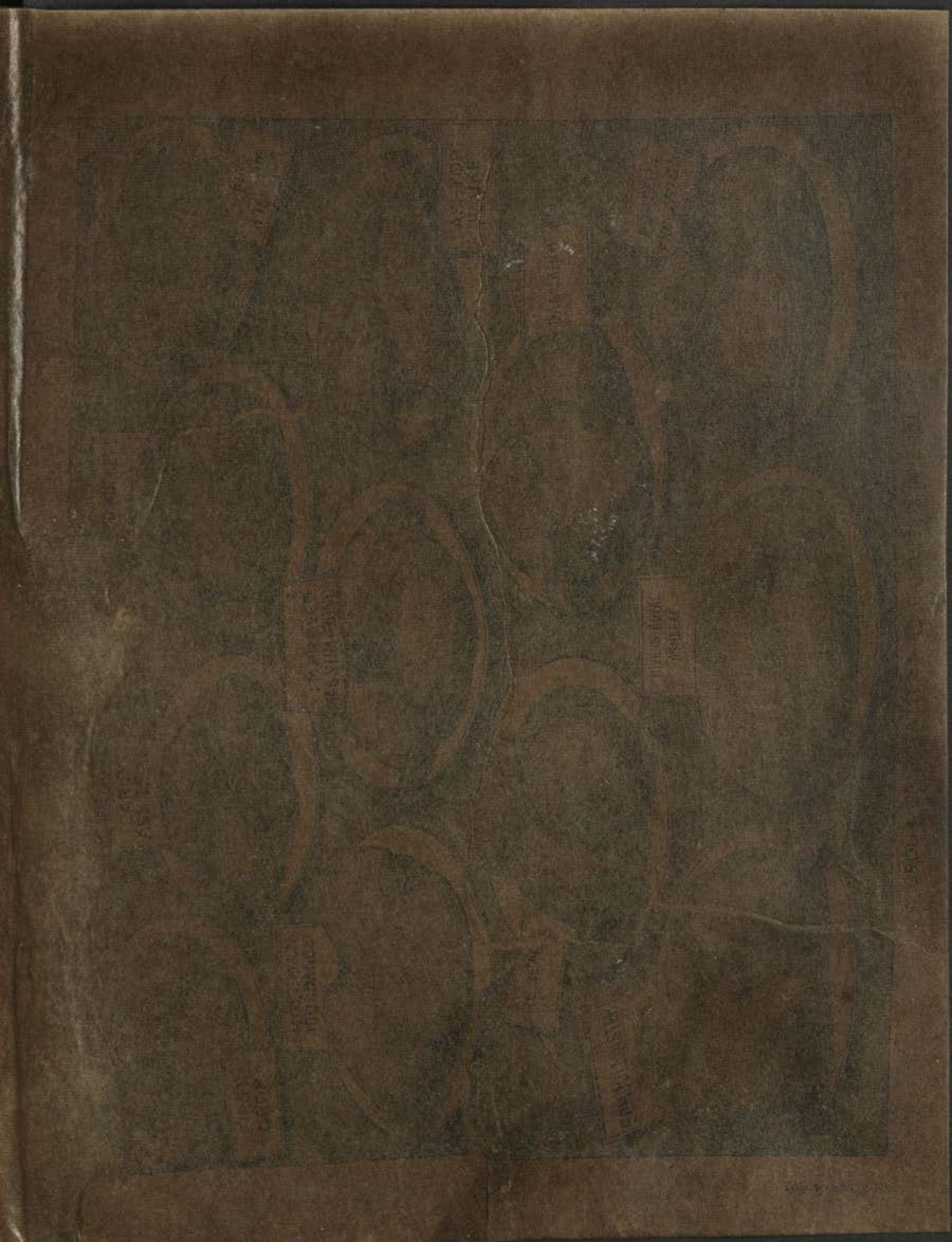
**Thyme.**—*See* Sage. This plant dislikes the hot season.

**Tomato.**—One ounce will give about 800 plants. Sow in boxes, and transplant to three feet apart. As they mature, cut out all superfluous growth to expose the fruit to the light. Such varieties as the Smooth Perfection, Dedham Favourite, Holborn Ruby, and Golden Gem, give marvellous returns of the most delicious fruits in most parts of India. The plants will require support unless against a fence or wall. A plan that might be tried with success in India is the placing of a piece of trellis shaped thus ^ over the plants, push the growth through it, and let the flowers and fruit lay on the top. The foliage will assist in keeping the roots shaded and cool, while the fruit will get the full benefit of the light. It is a great mistake to feed them too much at the earlier stages of growth. They will set their fruits more freely on pure water and good garden soil, if a start is given them in something richer, and repeated in liquid when fruit is forming. Shade from hot sun.

**Turnips, White and Yellow.**—One ounce will sow four square yards or 100 feet of drill; thin out to six inches apart, if in rows they should be a foot apart. The white varieties are the quickest growing, and the yellow kinds are hardier and are best grown for the cold season. The best Whites are the shapely Jersey Lily, Purple Top Strapleaf, Red Top Stone, Early Munich, and Green Stone. The best Yellows are the Golden Rose, Golden Ball, and Yellow Dutch. The Rutabaga or Golden Swede can also be grown similarly to the Turnip. This crop likes plenty of water, and prefers a cool situation.

**Vegetable Marrow.**—A packet of seed will give all that is required. Plant like a Cucumber and Gourd. The best sorts are Moore's Cream, Greenstriped, Custard, and Muir's Hybrid.

**Watercress.**—One packet of seed will supply all the plants required for one season. Sow thinly in pans, standing in water one inch deep; cuttings can be taken and replanted, but they must be kept in a very shady spot until rooted. A fine healthy esculent to cultivate. Where there is a running stream this plant can be easily grown.



# HILL AND MILITARY STATIONS.

The Hill Stations are fast becoming one of the most prominent and indispensable institutions of India. To each Presidency, Province, and Government is attached its own particular Sanatariums, and all these delightful spots, with many others, have their regular frequenters during certain seasons.

The months named below are sufficiently correct to be useful as a guide when sowings can be made; the seasons, however, are greatly influenced by aspect and slope of elevation, some of the stations lying on the table lands in the N.W., Central, and Southern Provinces being almost identical with the Plains, while at many of the highly situated resorts in the Himalayas the winter at times is prolonged. Out-of-door operations must, therefore, be conducted accordingly. The figures represent the altitude in feet.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ajmere | 1,600 | Aug. to Nov. | Jubbulpore | 1,350 | June to Dec. | Ootacamund | 7,300 | Jan. to Oct. |
| Almorah | 5,400 | March to Aug. | Khandalla | 2,000 | July to Dec. | Pachmari | 3,500 | June to Dec. |
| Amraoti | 1,200 | June to Dec. | Kotagherry | 6,000 | Feb. to Oct. | Poona | 1,850 | June to Dec. |
| Aurungabad | 1,890 | June to Dec. | Kolapore | 1,800 | May to Oct. | Quettah | 5,500 | Mar. to July. |
| Bangalore | 3,000 | April to Oct. | Landour | 7,000 | Mar. to July. | Ranikhet | 5,000 | Mar. to July. |
| Bellary | 1,400 | June to Dec. | Mahableshawar | 4,500 | May to Dec. | Rawal Pindi | 1,650 | Mar. to Aug. |
| Byjatur | 2,000 | June to Dec. | Matheran | 2,000 | July to Dec. | Satara | 2,350 | May to Dec. |
| Bolaram | 1,000 | June to Dec. | Mercara | 4,500 | April to Nov. | Secunderabad | 1,800 | June to Dec. |
| Coimbatore | 1,250 | May to Dec. | Mount Abu | 4,000 | Mar. to Oct. | Sholapur | 1,600 | June to Dec. |
| Darjeeling | 7,200 | Mar. to July. | Murree | 7,500 | Mar. to July. | Simla | 7,000 | Mar. to July. |
| Dehra Dun | 2,350 | Mar. to Aug. | Mussoorie | 6,000 | Mar. to July. | Srinigar | 5,000 | April to June. |
| Dharwar | 2,400 | May to Nov. | Naini Tal | 6,400 | Mar. to July. | Wellington | 6,200 | Jan. to Oct. |
| Indore | 2,000 | July to Nov. | Nasik | 1,900 | June to Dec. | Yercaud | 4,300 | Jan. to Oct. |
| Jeypore | 1,400 | June to Dec. | Neemuch | 1,650 | June to Nov. | | | |

## MONTHLY REMINDERS FOR THE ELEVATED STATIONS IN THE HIMALAYAS.

(For general directions see pages 24 to 30 and 35 to 50.)

**January to February.**—Frost and snow generally prevalent, very little gardening possible.

**March to May.**—As the season comes in, sow successional crops fortnightly of all kinds of Vegetables and Flowers as required, all more or less protected according to hardiness.

**June to September.**—Transplant such as require it, and gather crops for use as they mature, sow hardy greens and such winter crops as are not affected by weather.

**October to December.**—Lift all root crops that have ripened for storing, trench, manure and lay up the ground to sweeten. Take up and pot flowers that are likely to give more effect in the verandah, and protect them at night; such kinds as are perennial, and that remain in the ground, cut down and cover well with manure or ashes.

## USEFUL NOTES FOR THE ELEVATED HILLS IN OTHER PARTS.

**January.**—If favourable, make a sowing in the open ground of Peas, Broad Beans, Carrots, Potatoes, and the Cabbage tribe under protection.

**February.**—Sow more Peas, Broad Beans, Beet, Carrot, Onion, Lettuce, Leek, and Celery, and Parsley. Sow Hardy Flowers of sorts. (*See* pages 35 to 50.)

**March.**—Sow nearly all vegetables including Runner and Kidney Beans; also more Flowers.

**April and May.**—Make further sowings of Vegetables, Herbs, Marrow, Celery, Cucumbers, Endive; prick out and thin such crops as are ready. Plant Artichokes and more Potatoes. Sow nearly all kinds of flowers; thin out and transplant those that are sufficiently advanced.

**June and July.**—Sow, transplant and thin out crops. Water freely in hot weather; dry herbs. Sow Cabbage and Parsley for late use. Stick Beans. Most Flowers are now at their best. Order Bulbs from England.

**August and September.**—Pull up early crops that are over, keep ground clean and surface loose, sow salads. Sow and plant out Cabbages, &c., Kale and Sprouts. Sow Onions, Lettuce, Turnips, and more Flowers. Make Mushroom Beds. Earth up Celery; plant Bulbs.

**October and November.**—Store all root crops that are ready. Sow Early Peas, and transplant Cabbage tribe. Plant more English Bulbs. Earth up Leeks and Celery. Tye Lettuces and blanch Endive. Remove all old crops, and keep the soil about growing crops loosened. A sowing of various Flowers may be made now under protection.

**December.**—Dig, trench and clean up the garden and tidy all round.

# NOTES ON CEYLON.

The climate of Ceylon is hot and moist, but this does not hinder the island from being regarded as one of the most healthy of all Britain's tropical or sub-tropical possessions. The hot season extends from January to May, then follows a spell of wind and rain which runs on, intermixed with sunshine, generally until the end of July. August and September bring fine, hot sun, tempered by cooling breezes and refreshing showers, and from then to the end of the year the weather is genial and pleasant. About three-fourths of the island consists of undulating plains, diversified by spurs from the mountain system that reach an altitude of nearly 9,000 feet. "Up-country" may be reckoned from about 2,000 feet above sea level to the sanatorium, Nuwara Eliya, which is nearly 7,000 feet; between these limits all temperatures exist. English Flowers and Vegetables grow with great luxuriance in the more fertile spots on the Hills, but in the damp and low country the conditions are not so favourable for systematic cultivation.

Under such circumstances, it is somewhat difficult to define any regular season for the sowing of Vegtables and Flowers; perhaps, however, to name a period, we may give September to February as best representing the English spring. Successive sowing of the Vegetables named in the tables on page 12 may be made during almost every month, when a reasonable amount of moisture is to be expected. (*See* also pages 24 to 30.)

The following list includes most of our English Flowers that grow well at the different elevations. For cultivating directions, see pages 33 to 51.

For Beds or Borders.—Abutilon, Acacia, Alyssum, Amaranthus, Anemone, Antirrhinum, Aguilegia, Aster, Balsam, Begonia, Browallia, Campanula, Canna, Celosia, Chrysanthemum, Dahlia, Dianthus, Eschscholtzia, Foxglove, Gaillardia, Godetia, Heliotrope, Linum, Lobelia, Mimulus, Mignonette, Phlox, Salvia, Sunflower, Marigold, Dwarf Nasturtion, Violet, Zinnia.

As Climbers.—Ipomœa, Maurandya, Lophospermum, Thumbergia, Passion Flower, Clianthus, Tall Nasturtion and Tropœolum, Mina Lobata, Japanese Hop, Sweet Peas.

For Pots.—Begonia, Geranium, Gloxinia, Fuschia, Calceolaria, Primula, Cineraria, Cockscomb. (Also *see* page 51.)

The popular Hakgala Gardens at Nuwara Eliya are well worthy of a visit by the Amateur, as there is at all times something of interest. Cultivation is here carried on in its best form. English Seeds, Potatoes, and Fruits are all under systematic trial, with the greatest success, and are likely to flourish. Under glass Azaleas, Camelias, Fuchsias, look healthy. In the open are growing in apparent luxuriance nice plants of variegated Euonymus, Privet, hardy Azaleas, Irish Yews, Silver Holly, variegated Box, Lauristinus, Gorse, Roses, and several interesting Conifers. Other interesting experimental Gardens are situated at Peradeniya, Henaratgoda, Badulla, and Anuradhapura. The Shows of the Agri-Horticultural Society, usually held at Kandy in May, and Colombo, are opportunities the Amateur Gardener should never miss, English Flowers and Vegetables being generally exhibited in great variety.

TRICOLOR GERANIUM

# ENGLISH FLOWERS FROM SEED.

If Annuals are properly arranged according to their heights and colours, and care taken to weed and thin them, they are quite as effective in their display as their more expensive rivals. But the neglect of having them thinned out to a proper distance, so as to allow of a free circulation of light and air, so necessary to the full development of vegetable life, has caused them to fall into disgrace, owing to the weedy appearance they present when allowed to grow at random. They are also well adapted for growing in patches in a mixed border, where their tiny stems and brilliant colours produce a lively and graceful effect—relieving the somewhat stiff and leafy appearance of their more permanent neighbours, the subtropical and verandah plant.

Annuals.—May be sown in accordance with the instructions on the following pages, subject to uncertain climatic influences. The soil should not be too rich, but dug deeply and the surface rendered smooth and fine before sowing, as the small Seeds, when sown on rough ground, fall between crevices and get buried. The depth at which the Seeds should be sown must necessarily vary with their size. Small Seeds require only the slightest possible covering of earth; while the large ones may be covered to the extent of two inches. The soil used in covering should be of such a nature as not to be liable to cake by exposure to sun and air. Many varieties do best sown in pots or boxes under shelter, and transplanted, when large enough, to where they are to bloom. The common sorts, however, can be put into the open ground shaded from the hot sun, and only require thinning out.

Soil.—The soil best adapted to Flowering Plants, generally, is a light friable loam, containing a moderate amount of vegetable matter, and sufficient sand to render it porous; but as it rarely happens that the amateur has much choice of soil in India, it is fortunate that many of them will succeed in any but such as is of an extremely dry, stoney, or calcareous, nature. If they fairly take root there is generally an undue development of the foliage at the expense of the flowers. In soils of this description much may be done by thoroughly breaking up the superficial crust, or, as it is technically termed, "trenching" it, at least one spade deep, digging in plenty of manure, and if the operation can be performed so that the loosened soil is thoroughly exposed to the disentegrating influences of wind and other atmospheric agencies, the advantage will be greatly increased.

Some Annuals, though they will flower freely in the open ground in India, require protection from climatic changes during the earliest

stage of their growth, especially in the Northern Hills. Many of them are of great beauty and interest, and derive an additional value from flowering after most of the common Annuals are out of bloom. In the case of very small Seeds in pots, the soil put over them should be very thin, barely covering them, or they are liable to be carried down too deep, unless very carefully watered, it is even advisable to moisten the flattened surface of soil in the pot *before* sowing the Seeds instead of afterwards. Place the pots away from strong light until the germ begins to show itself, then gradually introduce them. Keep them shaded, this will prevent absorption by the rays of the sun, and the consequent necessity of frequent watering, which cakes the soil, and does much mischief to Seeds of slow growth, as they increase in size.

**Biennials** are those plants which do not flower until the second season, and are only in perfection one year. They should be sown from June to October, and when sufficiently strong transplanted, a forcing temperature such as is found in India frequently induces them to flower and die the first season in the Plains.

**Perennials.**—This class includes many of the most ornamental and useful flowering plants that decorate our gardens and rockeries; they are chiefly herbaceous in habit, producing new stems annually. Many of the species increase in size rapidly, and should be taken up and divided every second or third year, by which means the stock will be increased and the vigour of the plants much enhanced. The best time for sowing in the Plains is August to November, transplanting in the cold season. The Seeds should be sown slightly deeper than for Annuals, and will germinate very freely during the rains. In the Hills they can be sown in August, but will require protection through the coldest period, if they do not succeed sow again in March. Many of this class are grown as Annuals in India.

**Verandah Plants.**—Many of the highly ornamental foliaged plants, of which a list is given on another page, are useful for decorating the entrances and outer floors of the Verandah. In order that they may be moved about, it is necessary they should be in pots, and to produce the best effect, a good soil with plenty of room and thorough drainage must be given. Broken up turf, good leaf mould and clean sand constitute the best ingredients, which will be both rich and porous. Keep the plants away from roof drips, the burning sun, and when thirsty stand them in a pail of water for fifteen minutes, but only water when they require it, or the soil will go sour and all beauty be spoilt. (*See* page 51.)

# POPULAR ENGLISH FLOWERS,

## INCLUDING SHRUBS AND OTHER PLANTS THAT DO WELL IN INDIA.

Where a range of months is given, a sowing should be made at intervals. In the highly elevated Hills of the Himalayas, the autumn sowings of annuals must be made under protection, or the seedlings will not survive the cold.

**Abronia umbellatà.**—A compact annual of trailing habit, with rosy lilac flowers, after the character of the Verbena, thrives best in pots or pans. It does not like too much water or too strong sun.

*Sow in the Hills, September to February; in the* Plains—North, *October;* Central, *September;* South, *August.*

**Abutilon.**—A pretty flowering plant of tall growth and neat character, chiefly grown in India for the verdant greenness of its foliage. Sow in pots and prick out when large enough, either in the border or in larger pots. It is an advantage to soak the seed before sowing. Some of the varieties will grow six feet high.

*Sow in the Hills, March; in the* Plains—North, *October;* Central, *October;* South, *September.*

**Acacia.**—This is an Australian shrub of great beauty, the foliage pretty, and the flowers yellow, will only grow in the Hills; useful for decorating the background of borders, or as single specimens in pots.

*Sow in the Hills, September to February.*

**Accroclinium.**—A pretty daisy-like annual everlasting flower, for cultivation in the border. Water carefully when young.

*Sow in pots and transplant, in the Hills, January to April; in the* Plains — North, *October;* Central, *October;* South, *October and November.*

**Adonis.**—A small annual with bright scarlet flowers. Will thrive almost anywhere where the sun does not strike too powerful. Sow where intended to bloom, and thin out as required.

*Sow in the Hills, January to May; in the* Plains—North, Central *and* South, *October and November.*

**Ageratum.**—A pretty lilac border annual, that will grow very well in most parts, and flower luxuriantly during the cold season. Sow in pots and transplant to where intended to remain.

*Sow in the Hills, March to May; in the* Plains—North, *August,* Central, *September;* South, *September and October.*

Alonsoa.—A compact and showy annual with bright red flowers. Sow in pots and prick out when large enough to where intended to remain.

*Sow in the Hills, March; in the* Plains—North, *October;* Central, *October;* South, *September.*

Amaranthus.—A charming species of brightly-coloured foliaged annuals; they will thrive in any ordinary soil in India, and prove highly effective in the decoration of the verandah if not potted in too rich soil. The colours range from scarlet, crimson, orange, and striped.

*Sow in the Hills in March and April; in the* Plains—North, *July to September;* Central *and* South, *June and August.*

Antirrhinum.—Although a perennial, the new dwarf varieties of this familiar flower will bloom in India during the first season; it is an advantage, however, to pinch off the first flowering spikes, and the benefit will be apparent later on; they like nice rich soil; when transplanted, the operation must be carefully undertaken. Sow in pots and put out a foot apart when large enough. They require careful nursing through the hot weather. Known also as Snapdragon.

*Sow in the Hills in October, and again in April; in the* Plains—North, *October;* Central, South, *August to December.*

Aster.—A really beautiful annual, that does well in India, and should be grown in masses in every garden, both in pots and the border. There is no limit to the colours of this favourite. The Pœony flowered with incurved petals, the Victoria shapely and beautifully imbricated, the Chrysanthemum-flowered with compact habit. The English quilled, of very large form, the petals having the appearance of tubes. The Giant French, Globe German, Dwarf Bouquet, Cockade, and new Queen series, with many others. Sow in pots well drained, prick out into beds that are protected from wind and weather, and transplant again to their blooming quarters. Loosen the surface of the soil each time they are watered, and see this operation is carefully done.

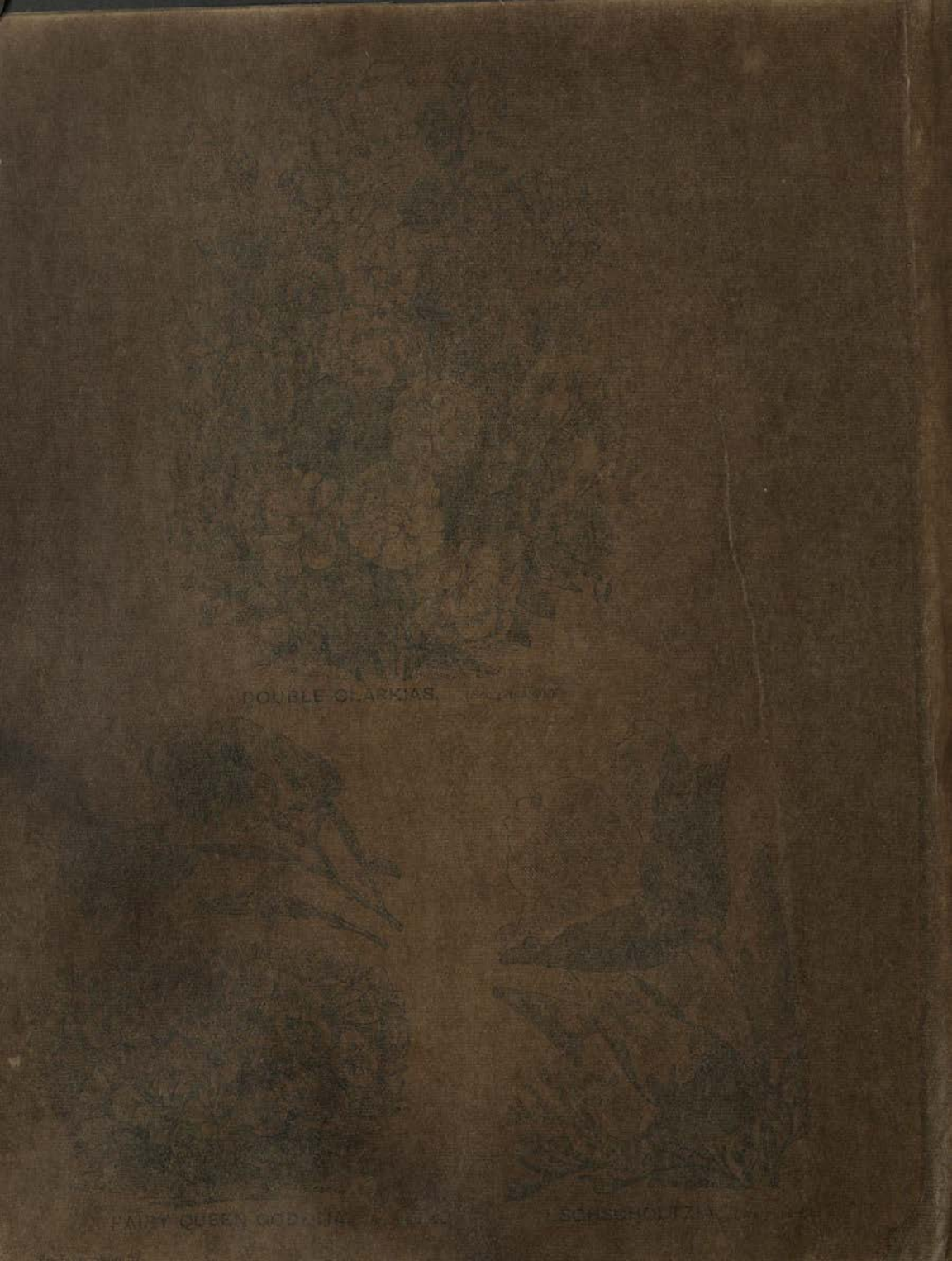
*Sow in the Hills in March and April; in the* Northern Plains, *August to November;* Central *and* South, *June to October.*

Auricula.—A pretty primrose-like flower, that will only thrive in the Hills. Sow in pans well drained, and prick out when large enough into single pots, afterwards transfer to a shady spot that is dry and away from the drips of trees. (*See* also Polyanthus and Primrose.)

*Sow in the Hills in September, and again February to April.*

Balsam.—A beautiful and easily-grown annual, which every gardener in India should cultivate. The best strains are remarkable for size and diversity of colourings in the flowers. Place the seed in water the day before required for planting, then sow it thinly in a box, or in a bed where it can be protected from bad weather; transplant the seedling nearly up to the seed leaf, two or even three times; nurse carefully each time till they recover; give plenty of water, alternately with some stimulant in it; the repeated transplantings will give an abundance

ENGLISH CAMELLIA-FLOWERED CABBAGE



of bloom at the expense of the foliage. It is a tiresome proceeding to attempt to keep the colours distinct.

*Sow in the Hills in August and April; in the* Plains—North, *May to October;* Central, *May to December;* South, *May to December,* monthly.

Bartonia aurea.—A pretty annual with yellow flowers. Likes good soil and plenty of water. Should be planted on a slope, or in elevated position.

*Sow in pots and transplant, or in the open ground; in the Hills in October and March; in the* Plains—North, *October;* Central *and* South, *September and October.*

Begonia.—The tuberous varieties will succeed well in the Hills. In places that suit them they are very effective; the flowers of some of the newer Single kinds being almost as large as Single Dahlias, the Double ones resembling Roses. To obtain the varieties true to name, tubers should be obtained from England from November to February; seed can be *sown in the Hills in September,* in pots of sandy soil, carefully protected; *and in the* Plains—North, *October;* Central, *October;* South, *November.* A sowing can also be tried in *April*—the seedlings grown on and dried off towards the end of the rains, and repotted for flowering in *February.*

Brachycome.—Pretty little free-flowering annuals of grass-like habit with bright blue Daisy flowers; does admirably for an edging plant. As the flowers begin to show directly it is put out, we recommend that they be picked off until the plant has obtained some size, or it will exhaust itself if they are allowed to mature at first.

*Sow in pots and transplant. In the Hills in April; in the* Plains everywhere, *in September and October.*

Briza.—An ornamental Grass. Very pretty in bouquets of dried flowers.

*Sow in pots and transplant, in the Hills, March and April; in the* Plains—North, *October;* Central *and* South, *September to November.*

Browallia.—A profuse blooming annual, with white and blue flowers. Does beautifully in the Hills.

*Sow in pots and transplant, in the Hills, in October and again in March; in the* Plains everywhere, *in October to December.*

Calceolaria.—The marvellous size and the beautiful colourings of the individual blooms of this popular herbaceous plant that have been reached by the leading cultivators in England is astonishing.

It is only likely to thrive in the more favourable situated stations in the *Hills,* and must be carefully *sown in pots or pans in September and again in March;* we fear in the Plains it is useless to try it, unless means can be devised by which it can be kept through the hot season.

Calandrinia.—A pretty annual in colours ranging from rose to violet. Suitable for borders and places where it can creep.

*Sow where to bloom. In the Hills, February to April; in the* Plains—North, *October;* Central, *October;* South, *September to November.*

**Calendula.**—A beautiful variety of the Marigold, so popular in English gardens, that will grow almost anywhere in India. The colours range from pure white to deep orange, the variety Meteor being beautifully striped.

Should be *sown where intended to bloom*, and thinned out to give sufficient light and air to each plant. This applies more particularly to the Plains. *Sow in the Hills, in October and March.* Plains—North *and* Central, *June to December*; South, *July to November.*

**Calliopsis.**—An annual that should be in every garden; the colours range from dark brown to crimson and yellow. Very useful for cutting. Can be sown in pots and transplanted in dry soils. In the South it will perhaps answer best if sown in the borders and thinned out. The blooms should be picked off directly they fade.

*Sow in the Hills, October and March; in the* Plains everywhere, *June, August to October.*

**Campanula.**—The popular Canterbury Bells, the species embracing both annual and perennial varieties. They answer best in the Hill Stations at high elevations. Cultivate in pots and transplant, or in the border and thin out. Some may flower the first, others not until the second season.

*Sow in the Hills, September to April; in the* Plains—North, *October;* Central *and* South, *August to October.*

**Canary Creeper.**—*See* NASTURTION and TROPEOLEUM.

**Candytuft.**—A popular English annual, generally known in India under the name of Iberis; of very easy cultivation, and does well in most parts in clumps or ribbons. Sow in the border where intended to bloom, and water freely when showing flower.

*Sow in the Hills, October and March; in the* Plains—North, *October;* Central *and* South, *August to November.*

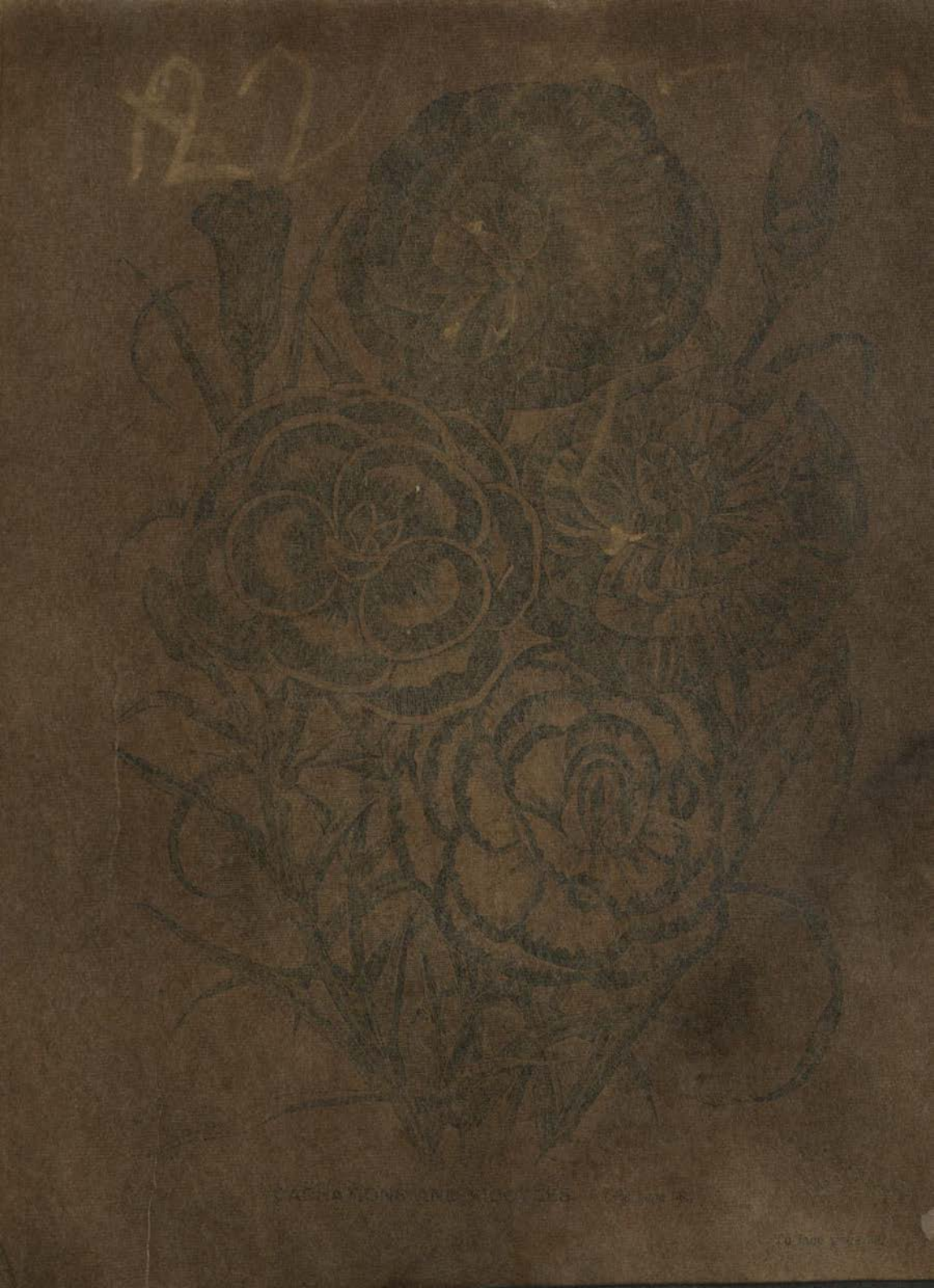
**Canna.**—This sub-tropical shrub is greatly thought of in England, where it forms a leading ornament in all well-arranged gardens. In India, however, it is practically a weed, growing wherever it is once introduced. Its use, therefore, can only be recommended for out-of-the-way places in which but little else can be cultivated. To fill up corners it is very useful; some of the varieties growing 6 feet high. It can also be put into pots for decorating the verandah.

*Sow everywhere, at any season excepting the height of the heat.* The Seeds require thorough soaking, or they will take some months to germinate.

**Carnation.**—*See* DIANTHUS.

**Cassia.**—A very pretty tree, like an Acacia, with elegant lattice-leaved foliage, and bearing racemes of beautiful yellow flowers, followed by pods that contain the seed; they form handsome plants either for decorating the verandah or in beds. There are several kinds, all of which flourish luxuriantly in most parts of India.

*Sow in pots in October everywhere.* In the Hills in the North they require protection during the coldest period.



LADY SATIN ROSE GODETIA.

**Castor Oil Plant.**—Will grow almost anywhere in India. Sown in pots and transplanted, or re-potted singly; the foliage is very pretty, but the plant soon gets weedy if not looked after with liquid water and fair treatment.

*Sow in the Hills, February and March; in the* Plains—North *and* Central, *July to October;* South, *June to November.*

**Celosia.**—*See* Cockscomb. The feathery forms are exceedingly pretty.

**Centaurea Cyanus.**—An annual that owes its origin to the Cornflower of the English fields. The Sweet Sultan is also embraced in this group. The colours range from white to dark purple, the bright blue being the favourite flower of the late great Emperor William of Germany. The seeds should be sown in the ground where intended to bloom, as they will not bear transplanting, especially in the hot Plains.

*Sow in the Hills, October and March; in the* Plains everywhere, *October and November.*

**Chrysanthemum.**—The magnificent group of flowering annuals and perennials under this name have of late years been in great demand everywhere; and in no part of the world do they succeed so well as in India, many of them being natives. The large single-flowered annual kinds have been so greatly improved, that the colours now include every shade, and the markings on some are really exquisite.

*Sow in the Hills, March to May, and transplant; in the* Plains *sow in the open, September to November, and thin out.* Keep all flowers picked off until the plants attain a bushy form, or they will run up to a single head, and soon get exhausted; water freely. The Japanese Chrysanthemum, which forms such a lovely sight in English conservatories in the winter, can be cultivated in India from seed, re-potted, and afterwards transplanted to the open ground in well-drained spots away from the scorching sun. They can also be cultivated throughout in pots, if given plenty of room with rich soil and liquid manure. The flowers must be thinned out to a very great extent if fine blooms are desired. What are called "Stools," *i.e.*, the plants after they have flowered and are cut down, can be sent out from England about December. Small plants can be brought out safely, but the risk is great if packed in a case out of pots for such a critical journey.

**Cineraria.**—The perfection that has been reached with this beautiful herbaceous plant in England by the leading seedsmen is astonishing—flowers three inches across being quite common in the best collections. It must be treated as an annual in India, and should be kept growing when once the seed germinates. The seed is very minute, and requires careful sowing, pressed gently into the soil, which should be sandy and fine, and covered with a piece of glass, and over this a piece of paper, until growth appears; when large enough pot singly into small pots in good rich soil, and re-pot as required. It is best to make more than one sowing, and be sure the plants do not get a check. If the flower

spike appears before the plant has reached a fair size, cut it out. It is a difficult matter to keep this plant through the hot season.

*Sow in the Hills, February to April; in the* Plains, *September to November.*

**Clarkia.**—Pretty annuals, with flowers ranging from white to deep rose. Height, about 2 feet. Sow in the ground where intended to bloom, and thin out as required. Take off some of the flowers if a profusion appears; this will strengthen those that remain, and add to the general beauty of the plant.

*Sow in the Hills, October and March; in the* Plains, *August to December.*

**Clianthus.**—The Glory Pea of Australia. A beautiful climber, with bright scarlet and black flowers, produced in clusters. Sow in pots and transplant where it can be trained up a trellis. Take care of the seedling until it gets established. The position must be well drained, or it will soon sicken and dwindle away. It can be grown in the Plains in dry, shady spots, but it answers best in the Hills.

*Sown in March; and in the* Plains, *September to November.*

**Clintonia.**—A pretty dwarf annual that grows well in India. Sow in pans, which must be stood in a cool and moist situation, and re-pot the seedlings twice before finally planting out. Keep the flowers cut off until the plant attains a good size, when patience will be rewarded with a bright display; the colours ranging from white to purple.

*Sow in the Hills, March; in the* Plains—North *and* Central, *September and October;* South, *November.*

**Clove.**—*See* DIANTHUS. An old fashioned English flower beautifully scented.

**Cobœa.**—A pretty climber or creeper of rapid growth. Sow three seeds edgeways in a large pot, and transplant them, without removing the soil, to the position in which they are intended to flower, and treat as an annual.

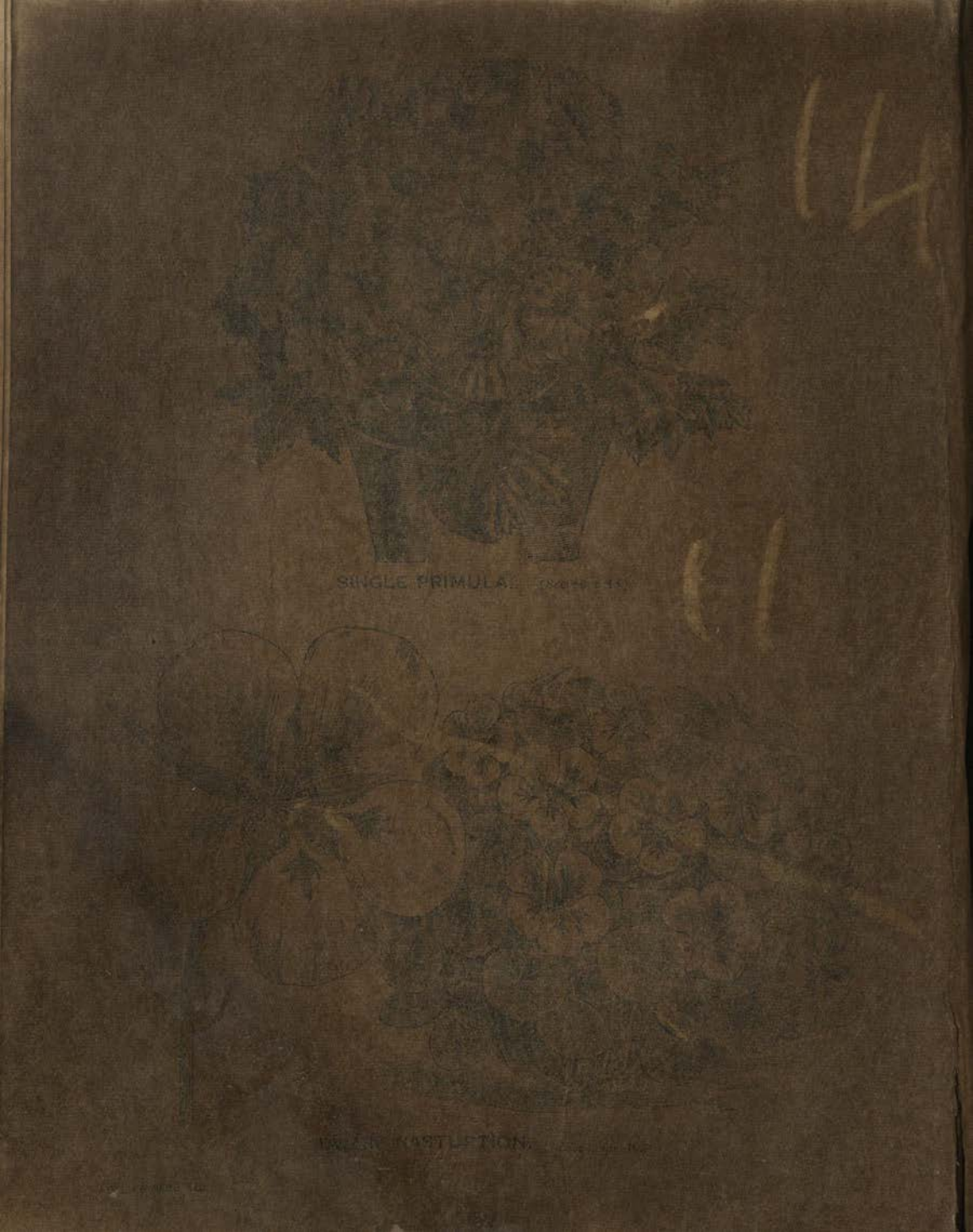
*Sow in the Hills, October and April; in the* Plains—North *and* Central, *October and November;* South, *August to October.*

**Cockscomb.**—A variety of the Celosia, ranging in colour from bright yellow to deep crimson. Sow in pots and transplant singly as soon as large enough to handle; re-pot as required, and keep the plant well fed, and with plenty of root room. The fine Empress variety produces combs of colossal proportions. The plumosa varieties can be bedded out.

*Sow in the Hills, March to May; in the* Plains everywhere, *June to September.*

**Coleus.**—A soft-wooded plant, grown for its handsome foliage. Suitable either for pots or beds.

It can be readily cultivated from seed sown in pots, under protection, in the *Hills in September, and again in March; in the* Plains *in October and November.* The flower stems should be cut out directly they appear; if allowed to bloom, it is at the expense of the foliage.


SINGLE PRIMULA

**Collinsia.**—A dwarf but effective border annual, that should be sown where intended to bloom.

*Sow in the Hills, March and April; in the* Plains—North *and* Central, *September and October;* South *in November.*

**Convolvulus.**—A popular and beautiful class of Annual, both climbing and dwarf, with large trumpet flowers, which does exceedingly well in the Hills. The flowers embrace every shade of colour, and are at their best in the morning, in some places in the Plains it will not thrive, but it should be tried by all cultivators. The Ipomœa belongs to this tribe, and does well almost anywhere. Place the seed in water a day before sowing.

*Sow in the Hills in March and April, and in the* Plains, *June to October.*

**Cuphea.**—A showy annual and perennial, which should be sown where intended to bloom, and thinned out as required. The colours range from yellow to scarlet and purple.

*Sow in the Hills, March to May; in the* Plains everywhere, *October and November.*

**Cyclamen.**—A beautiful bulbous plant, with prettily marked foliage, and exquisitely scented flowers; very popular in England. The colours vary from pure white to deep purple, and in the best strains the blooms are as large as daffodils. They can be grown from seed sown in pots *in March in the Hills, and September in the* Plains, under protection. The best plan, however, is to obtain bulbs from England from September to January.

**Dahlia.**—Of all tuberous-rooted flowering plants none has become so popular of late years as the Dahlia. The single varieties now take a leading place in all the best gardens in England; it is not surprising therefore that this fancy should have extended to India, where the Dahlia also grows satisfactorily. The colours range from pure white and yellow to brown and claret-red; in fact it would be difficult to name a shade excepting blue that they do not produce. Both double and single Dahlias can be supplied in tubers from England from October to January. As the double varieties are so uncertain from seed, this is the best way to procure them. The Cactus section is a beautiful group.

*In the Hills* sow in pots under protection, *in March and April; in the* Plains, North and Central, *August to November; in the* South an early sowing may be tried *in July;* re-pot and transplant, when established, to a good and deeply worked position, and they will flourish luxuriantly.

**Datura.**—Robust growing annuals with large trumpet flowers, well known in all parts of India. Like the Canna, they will grow anywhere, and can be used for any purpose.

*Sow in March in the Hills; July to October in the* Plains.

Delphinium or Larkspur.—A beautifully coloured flowering perennial, of which many varieties are treated as annuals in India. It answers best in elevated places. There are several kinds, ranging in colour from white to blue, height from 1 to 3 feet. Many of the Larkspur are annual only.

Should be sown *in the Hills*, where intended to bloom, *in March and April, and in the* Plains—North *and* Central, *in November and December;* South, *August to October.*

Dianthus.—A beautiful section of flowering plants, many of which are annual, others perennial. Some of the annual forms are known as Indian Pinks, and flourish well in nearly all parts. Sow in pots *in the Hills from March to May; and in the* Plains—North *and* Central, *from May to October; in the* South *June to November;* and transplant to where intended to bloom, taking great care of the seedlings until established. Pick off the flowers as they fade, to prevent the seed vessels forming, or all effect will be lost. Carnations, Cloves, Picotees and Pinks, all belong to this group. Seeds of these can be sown in the same manner, but finer flowers may be expected if the soil is enriched; a percentage is sure to produce single flowers, but all should be allowed to bloom before weeding out commences.

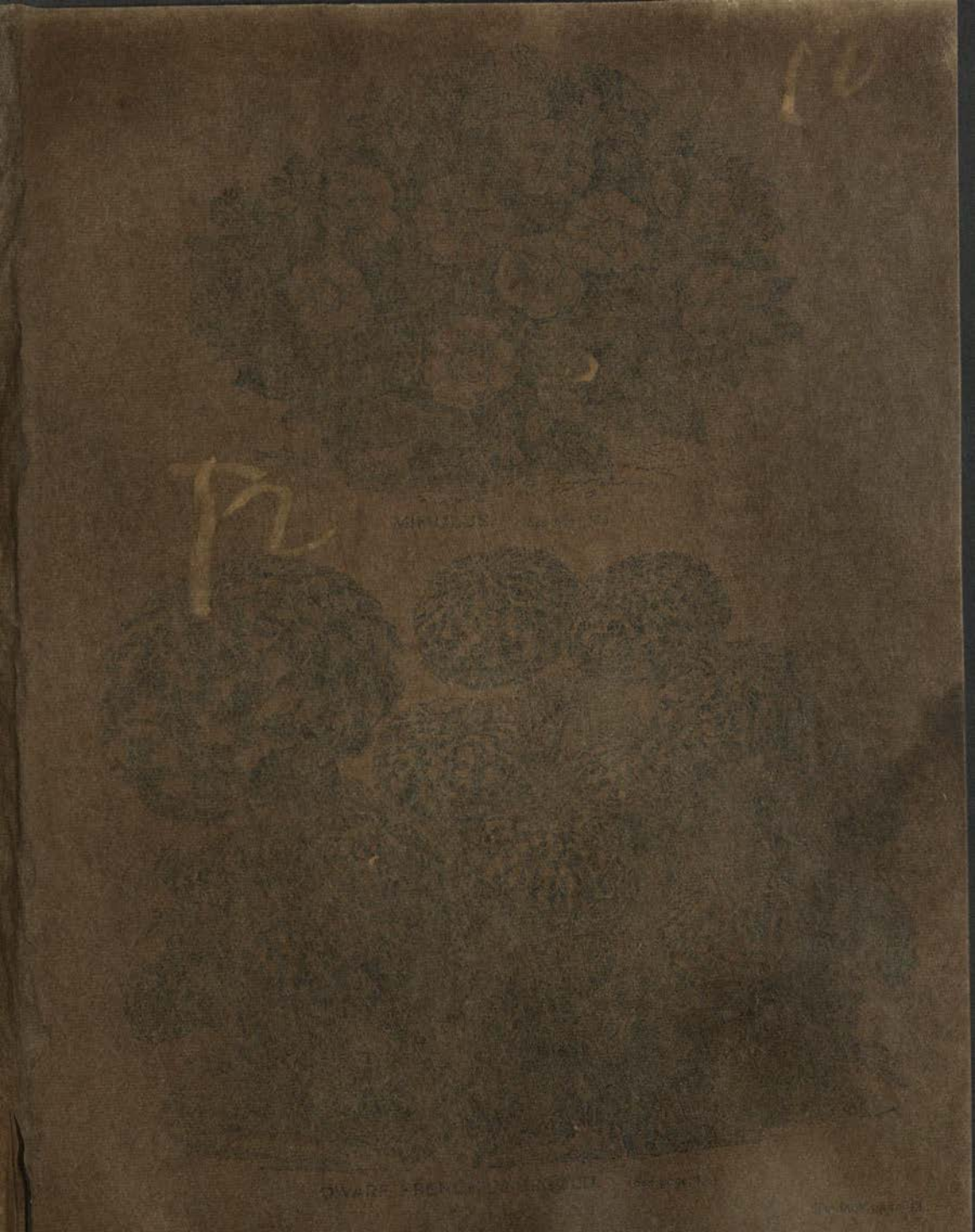
Erysimum.—A large yellow-flowered annual, growing about 18 inches high. Should be sown in pots or beds, and transplanted. *In the Hills in March and April,* and where intended to bloom. *In the* Plains during *October.* Prefers a light soil that is well drained.

Eschscholtzia, or Californian Poppy.—A dwarf and brilliantly coloured annual, ranging from white to yellow and pink. Sow in the open *in the Hills* in *October,* and again *in March or April,* and transplant to where intended to bloom. Cut off the flowers as the petals drop. *In the* Plains, sow where intended to bloom *in October;* in a cool situation if possible.

Eutoca.—A beautiful annual growing about 1 foot high, with bright blue or pink flowers, that are very ornamental. *In the Hills* sow in the open in *March or April,* and transplant carefully. *In the* Plains, sow *in October,* where intended to bloom.

Fuchsia.—A beautiful flowering shrubby plant, for cultivation chiefly at Hill stations in pots or beds. Generally grown from cuttings, but can also be produced from seed, sown *in October and again* in *March.*

Gaillardia.—A great improvement has been made in this highly popular plant, and the beautifully coloured gold-bronze yellow and brown flowers are now produced as large as miniature sunflowers. It does well in India treated as an annual, blooms profusely, and is very lasting if the old heads of bloom are cut away as they fade. Can be sown either in the ground or in pots, and transplanted. *In the Hills in March,* and the Plains *July to October.*



EXHIBITION PLANTS OF MIGNONETTE

**Geranium.**—This ever-popular flowering plant, with its emerald green, bronze zoned, or tricolour foliage, is a great favourite at most of the Hills stations in India, where it does well either as a pot plant, or bedded out. Its cultivation in the Plains is rather precarious, still with care it can be grown in the lower levels in exposed situations. It is not possible to ensure any certain variety from seed, even if saved from the brightest foliaged parents. Many of the seedlings will produce the ordinary green-leaved kinds, these, however, should not be discarded until it has been fully proved what they are, as their true character does not always show itself the first season. Sow the seeds in an upright position, just burying that part containing the germ. Rooted plants can be sent from England from November to January.

*Sow in the Hills*, in pots, carefully prepared with sandy loam, *in March and September; in the* Plains *in November;* an early sowing may be tried *in June*, and if successful, the seedlings become attractive during the cold season.

**Gilia.**—Very pretty free flowering annuals, suitable for beds or borders. Cultivate in pots and transplant.

*Sow in the Hills, March; in the* Plains everywhere, *September to November.*

**Godetia.**—Brilliant and profuse flowering annuals that grow about one foot high. They are best sown in pots and transplanted in a group or mass; the colours range from white to deep crimson. The new varieties, Princess of Wales and Lady Satin Rose, are probably the finest annuals of modern introduction.

*Sow in the Hills, March; in the* Plains—North *and* Central, *October;* South, *August and September.*

**Helichrysum.**—A pretty everlasting flower, of various colours, from yellow to claret. Useful for decorating. Height, from 1 to 3 feet. Sow in pots, and transplant in the border.

*Sow in March in the Hills; in the* Plains—North, *October;* Central *and* South, *September and October.*

**Heliotrope.**—A sweet-scented flowering shrub, with the popular name of Cherry Pie. It can be trained to grow as a bush, standard or climber. Give good soil and plenty of sun when established.

*Sow in the Hills, in pots, March and October; and in the* Plains *from October in the* North; Central *and* South, *August to December.*

**Hibiscus.**—A robust growing shrubby plant, some varieties being annual, others perennial. The annual varieties reach a height of about 3 feet. Grows well in India in almost any situation, and is very decorative.

*Should be sown in the Hills, October or March; and in the* Plains *from July to September.*

**Hollyhock.**—A tall and stately biennial that has been greatly improved in England of late years, where it is sometimes cultivated as an annual. Sow in boxes, and transplant when large enough into the open ground,

in good soil, deeply dug, and keep well watered; or they can be sown in the open thinly, if more convenient. Some of the seeds are sure to produce single flowers, but many of these are exceedingly pretty, and in England have become, with the Single Dahlia, almost as fashionable as the Doubles. This is a beautiful plant to cultivate for effect. Average height 6 to 8 feet.

*Sow in October or March in the Hills, and October and November in the* North *and* Central Plains; *August to October in the* South, *and transplant.*

Humea.—An elegant biennial, soft-wooded shrub, with drooping and sweet-scented foliage. Height, 6 to 8 feet.

*Sow in pots in the Hills, October and April; in the* Plains *in November*, and re-pot singly; then transplant to where intended to grow, in a dry situation. It bears a pendulous grass-like flower, but the foliage is its chief characteristic.

Iberis.—*See* CANDYTUFT.

Ipomœa.—A beautiful and easily cultivated climber. *See* CONVOLVULUS.

Ipomopsis.—A handsome scarlet-flowered biennial, usually cultivated as an annual in India. If by any means the plants can be kept safely through the hot and rainy season it will flower magnificently during the cold weather.

*Sow in October and March in the Hills, and October or November in the* Plains.

Kaulfussia.—A neat and pretty annual, well adapted for small beds.

*Sow in pots and transplant, in the Hills in March; in the* Plains, *October in the* North; *November in the* South.

Larkspur.—*See* DELPHINIUM.

Lavender.—An old-fashioned English shrub, with sweetly-scented flowers. It will grow fairly well in India, planted in good light soil, and kept well watered in dry weather. Soak the seeds before planting in wet sand.

*Sow in the Hills in pots in October or March; in the* Plains—North *and* Central, *October;* South, *November.*

Leptosiphon.—A beautiful tribe of Ornamental Annuals, with masses of white, lilac and rose-coloured flowers. Height, 4 to 15 inches. Sow in the open where intended to bloom, and thin out as required.

*In the Hills, March; in the* Plains—North *and* Central, *October;* South, *November.*

Linaria.—A showy annual, varying in colour—white, yellow, and purple; very effective if sown in masses where intended to bloom, the seed, however, must be sown thinly.

*Sow in March and April in the Hills; October and November in the* Plains.

**Linum.**—Garden varieties of the flax of commerce, very pretty in India; the flowers are brilliant scarlet, and produced on stems about 15 inches high. Treat as an annual, and sow where intended to bloom. In the border it does beautifully.

*Sow in the Hills, March and April; in the* Plains—North *and* Central, *November to February; in the* South, *August to November.*

**Lobelia.**—A pretty dwarf annual of both compact and straggling habit. Sow thinly in pans, that should be stood in a cool and moist situation, re-pot twice before finally planting out, cut all flowers off as they appear until the plant attains a good size, then look for a pretty display of lovely bloom, ranging from white and purple to the brightest of blues. The seed being so minute must only be pressed into the soil, and not deeply covered.

*Sow in the Hills, March; in the* Plains, *August to October;* an early sowing may be tried *in July in the* South.

**Lophospermum.**—A pretty herbaceous creeper, with bell-shaped flowers; prefers a light soil. Sow in pots, and prick out either three or four in a pot, or on some sloping position where they can trail.

*Sow in the Hills and* Plains *in October.*

**Lupins.**—A pretty annual, with flowers embracing all colours. Sow three or four seeds (after being soaked) where intended to bloom, in a patch. Delights in a light and good soil, and will pay for a little attention. Pick off the pods as they form, or all effect will be lost.

*In the Hills, March and April; in the* Plains—North, *August;* Central, *October;* South, *November.*

**Malope.**—Showy annuals, with saucer-shaped flowers, varying from white to pink. Height, 1 to 2 feet. Sow in the ground and transplant.

*In the Hills, March; in the* Plains, *July to November.*

**Marigold.**—Both the French and African are showy, free flowering annuals that do well in India. Sow in pots or boxes, and transplant singly in beds or masses, or can be sown where intended to bloom. Height, 1 to 2 feet.

*Sow in the Hills, September and March; in the* Plains—North, *August to October; in the* Central *and* South, *June to December.*

**Martynia.**—A robust growing shrub, with large bell-shaped flowers, followed by a peculiar formed pod. Height, 2 to 3 feet.

*Sow in the Hills, February and March,* in pots protected, and transplant as soon as the weather moderates; *in the* Plains, *October;* and transplant in a position where plenty of room can be given.

**Marvel of Peru.**—A pretty herbaceous shrub, grown all over India. Flowers of all colours. Height, 2 feet. Place one seed in the ground at intervals of 2 feet every way.

*Sow in the Hills, March; in the* Plains—North, *October;* Central, *September;* South, *August.*

Maurandya.—A pretty creeper, with flowers embracing almost every shade of colour. Can be grown in pots to trail, or in boxes, almost anywhere.

*Sow in the Hills, September to March; in the* Plains—North *and* Central, *October to December;* South, *August to November.*

Mignonette.—A universally-known and popular flowering annual that will grow in almost any soil or situation in India. If cultivated in rich soil it gives a stronger growth, and consequently a much finer bloom; but this mode of cultivation is not always convenient, especially in the Plains. Pick out all spikes of bloom until the plant has reached a good size, any delay this may occasion will be amply rewarded. Water freely on poor soils. Sow thinly where intended to flower.

*In the Hills from March to May; in the* Plains, *June to November.*

Mimulus.—The large trumpet-flowered Musk, blooms profusely in most parts of India. The new Queen's Prize strain produce immense flowers, as beautifully marked as the herbaceous Calceolaria. The seed should be sown thinly in light soil, with plenty of sand, and transplanted two inches apart into a somewhat similar material, then re-potted singly. They like plenty of water, which must not be given overhead. Very effective as bedding plants in the Hills, but should not be put out until the cold weather is over.

*Sow in the Hills, September and March; in the* Plains everywhere, *May, August and October.*

Myosotis.—The Forget-Me-Not of English Gardens. It will thrive in most parts of India, in moist situations, from seeds sown in pots *in the Hills, October; in the* Plains—North, *November;* Central, *October;* South, *August to October.* If pricked out into other pots they must be kept standing in half-an-inch of water; if transplanted in the ground, the position must be a cool one, as they do not like the heat that prevails in the Plains, where they should be treated as annuals and encouraged to bloom before the hot season sets in.

Nasturtion.—An exceedingly pretty annual, with brilliantly coloured flowers, that should be grown in every garden. The section includes both dwarf and climbing species, all of which are great favourites. The dwarf varieties make excellent bedding plants, the show of bloom being perhaps unequalled by any other annual; the newer varieties, Empress of India, Chameleon, Ladybird, and others, are charming types. The various colours sown in lines make a very effective show, and if the seed pods are kept picked off they will last much longer. The tall varieties can be trained to creep or climb. Sow where intended to bloom six seeds to a square foot. The loose covering on the seed should not be broken away, as there are constituents in the husk that assist in nurturing the seedling. Mix with wet sand the day before sowing. The Canary Creeper can be cultivated in a similar manner.

*In the Hills, March or April; in the* Plains—North, *October and March;* Central, *July to December;* South, *July to December.*

Nemophila.—A neat growing and profuse flowering annual, to be sown where intended to bloom in clumps, or lines. The colours range from white to intense blue, Insignis, Maculata, Atrocœrulea, and Bluebell being the best representatives of their class. Give plenty of moisture and shade.

*Sow in the Hills, September and March; in the* Plains—North, *November;* Central, *October;* South, *September and October.*

Œnothera.—A handsome class of flowering plants, known as Evening Primroses, for beds and borders, that will grow in any situation with a moist foundation. *In the Hills* they can be treated as perennials, and should be sown in a box or in the open ground *in September or March; in the* Plains, where intended to flower, from *September to November.*

Pansy.—A favourite English flower, grown by all lovers of beautiful bloom. Unfortunately, its cultivation in India is somewhat precarious, the climate being too uncertain. The seed should be sown in pots or boxes *in the Hills in March; and in the* Plains, *from July to November;* and transplanted to a cool situation where, with some amount of care, a fair display of flowers may be expected. They do best bedded out. The Viola and Violet, which are related to this plant, will thrive in the Hills in all parts of India, if sown in March or April.

Passion Flower.—A beautiful Climber, that can be grown in India in pots, and transplanted when a few inches high, to decorate the verandah.

*Sow in the Hills, September or March; in the* Plains, *June and September.*

Pelargonium.—*See* GERANIUM.

Perilla.—An ornamental annual, grown for its bronze foliage. Very effective as a contrast in border and beds. Sow in pots and transplant.

*In the Hills in March; in the* Plains—North, *October;* Central, *September*, South, *August and September.*

Pentstemon.—A pretty Antirrhinum-like flowering perennial, that is in perfection during the hot and rainy seasons. Sow in pots and transplant.

*In the Hills, September and March; in the* Plains *in September and October.*

Petunia.—A beautiful annual, that does well in India either as a pot or bedding plant. The newer selections of the Emperor strain have reached such a stage of perfection as to be termed marvels of beauty, the large trumpet flowers being simply gorgeous. The seed is very minute, and should be carefully sown in very sandy soil. *In the Hills from February to April; and in the* Plains—North, *September and October;* Central *and* South, *July to November.* The soil should not be too rich, or the foliage will become over luxuriant at the expense of the bloom. Keep the seed-pots away from burning sun.

**Phlox.**—A magnificent annual, with beautiful colours and lasting duration, of easy cultivation, and equally adapted for bedding in masses or pot culture. Probably no other flower succeeds so well in the Plains, and we recommend it to every cultivator of flowers in India for beautiful bloom during the rainy and hot months.

*Sow in the Hills* under protection *in October and April; in the* Northern Plains *September to November; in the* Central *and* South *May to November.*

**Picotee and Pink.**—*See* DIANTHUS.

**Polyanthus.**—A popular English bedding and border plant that will do fairly well in the northern parts of India. Sow under protection *in October in the Hills and November in the* Plains. Transplant to raised beds when large enough, and during the hot season shade from the scorching sun. Water freely with liquid manure when showing bloom.

**Poppy.**—A gorgeous and effective annual that is quite at home in all parts of India. The flowers embrace almost every shade of colour, and are both single and double. Sow the seed where intended to bloom, and if the seedlings appear too closely they must be thinned out. Height, 3 inches to 3 feet.

*Sow in the Hills, March to May; in the* Plains—North, *October;* Central *and* South, *August to November.*

**Portulaca.**—A popular creeping annual, with flowers of almost every colour. It delights in a sandy soil, and when established the drought seems never too long nor the heat too intense. When everything else is burning up, the Portulaca will give its largest flowers and brightest colours; it will also bear careful transplanting. Sow thinly where intended to bloom.

*In the Hills from February to May; in the* Plains, *from January to July in the* North, and from *December to August in the* South.

**Primrose.**—*See* POLYANTHUS.

**Primula.**—A beautiful class of flowering plant. The best English strains have now reached such a high standard of excellence as to be simply marvellous in the attractive colourings and enormous size of the individual blooms. They can be grown *in the Hills*, if sown with care in pots containing loam and sandy soil, *from February to August*, and placed in a cool and shady position. Prick out singly into small pots when large enough to handle, and re-pot as they require it, watering only when thirsty, and then not overhead; if over-watered they will rot at the crown. A sowing can also be tried at the lower levels *in November.* P. Japonica will thrive *in the Hills* in the border.

**Rhodanthe.**—A pretty everlasting, with white or pink flowers. It answers best as a pot or bedding plant in the Hills; if the latter it should be transplanted. The flowers are very useful for decorating vases.

*Sow in the Hills, March and April; in the* Plains—North, *October;* South, *November.*

**Salpiglossis.**—An effective annual, with peculiarly veined flowers in various colours. Grows about 18 inches high, and should be sown in pots in *Hill stations during March and April,* and transplanted when large enough to the border, to bloom during the hot season.

*Sow in the* Plains—North, *October; in all other parts, September*

**Salvia.**—Pretty flowering perennial shrubby plants of the Sage tribe, that answer best in the Hills, in a shady and cool spot. S. Patens is a brilliant blue; Fulgens, bright scarlet; and others vary from white to violet.

*Sow in pots in September or October, and again in February, if those earlier sown do not succeed.*

**Saponaria.**—Compact-growing annuals, suitable for the edges of borders. They answer very well in the Plains in ordinary soil, sown where intended to bloom. *October in the* North; *September in the* South. The flowers are pink or white, and star-shaped. It grows too rank in most of the Hills to be effective, but may be tried if sown in March.

**Silene.**—A pretty pink or white-flowered plant that should be treated as an annual in most parts of India. The dwarf or compact varieties only are recommended, as the taller sorts grow so wild and straggling. *Sow in the open, in the Hills in October and again in March; in the* Plains *in November,* and prick out where intended to flower. Keep the seed-pods picked off as the flowers fade, and the successional bloom will make a pleasing show.

**Stock.**—This popular sweet-scented annual does well, in Northern India especially; there is a difficulty, however, in many places to get them to flower in the Plains. This, we think, is probably when they are grown in too loose soil, and are not firmly planted. They delight in a soil in which there is plenty of lime, and should be removed two or three times in the Plains; this may induce them to flower profusely.

*The annual varieties should be sown in the Hills, March to June; in the* Plains, *October and November; an earlier sowing may be tried in August in* Central and Southern India.

*The biennial varieties should be sown in the Hills, March to July; in the* Plains, *November.*

**Sweet Pea.**—A pretty annual climber, that must be sown where intended to flower, and staked. It flourishes best in the Hills and Northern districts.

*Sow in the Hills in March; in the* Plains—North, *October;* South, *November.* Soak the seed before sowing.

**Sweet William.**—*See* DIANTHUS. Sow in pots and transplant in a cool place.

**Sunflower.**—Popular annuals in almost every garden in England. There are dwarf and tall varieties; the latter reaching 6 feet, with blooms 12 inches across. Soak the seed and plant singly where intended to flower; support with stout stakes.

*Sow in the Hills in April; in the* Plains, *June to January.*

**Tagetes.**—*See* MARIGOLD. *Sow May to September,* and transplant.

**Thunbergia.**—Pretty climbers or trailers in vases or on rockwork. Grow readily in India.

*Sow in the Hills in March and April; in the* Plains—North, *October;* South, *September.*

**Tropæolum.**—*See* NASTURTION. The tuberous-rooted varieties that grow so freely in Scotland will thrive in the Hills of Northern India. If placed in a large pot they will run over pillars and trellis readily. Care must be taken that the thread-like growth from the tubers does not get broken or eaten by ants, or the whole plant will perish. The Canary Creeper, although of this tribe, is an annual grown from seed only.

**Verbena.**—This beautiful flowering plant grows luxuriantly in elevated situations in India in fairly good soil, *sown in October.* It can also be sown *in the same month* to bloom in the Northern Plains the *following April,* and if carefully treated they may survive the hot and wet seasons and flower again at a later period. *In the* South *sow June to December,* in pots, and transplant carefully in a shady and cool spot, to bloom in the hot season.

**Viola and Violets.**—*See* PANSY. Thrive best in cool and elevated situations.

**Virginian Stock.**—A favourite annual, to be sown in India where intended to bloom in any ordinary garden soil, the lighter it is the more compact will be the habit and brighter the colour of the flowers.

*Sow in the Hills in March; in the* Plains, *September to November.*

**Viscaria.**—A profuse flowering and brightly-coloured annual, to be sown where intended to flower.

*Sow in the Hills in March; in the* Plains, *September to November.*

**Wallflower.**—An old-fashioned English flower, with peculiar scented attractions. Thrives best in Northern India, and in the Hills.

*Sow in the Hills, in pots, October and March; in the* Plains, *September and October.* Transplant when large enough singly, in a cool and shady spot, in fairly good soil, that is well drained.

**Zinnia.**—A charming and effective annual, bearing both Single and Double flowers, in all colours, that have been greatly improved in size of late years. The Single flower is sometimes looked upon as an intruder, but it is very pretty, and should not be discarded. Sow in boxes, and transplant when large enough to the beds where intended to flower.

*In the Hills, September and October, and again in March; in the* Plains—North, *May, August, and October;* Central *and* South, *April to December.*

# A SELECT LIST OF ORNAMENTAL FOLIAGE PLANTS FOR SUB-TROPICAL GARDENING.

All of which can be grown from Seed.

Many will also be found of great value for grouping in pots to decorate the Verandah of the Bungalow. Sow in the Hills in August and March; in the Plains—North and Central, in September and October; in the South during the Rains, in boxes or pots, and re-pot when large enough, singly, in good soil with plenty of drainage.

| | Average Height. ft. | in. |
|---|---|---|
| **Acanthus latifolius**, very effective, *dark-green* foliage | 2 | 0 |
| **Amaranthus bicolor ruber**, foliage *green*, striped and shaded with dark *red*, tipped with *yellow* | 2 | 0 |
| —**elegantissimus**, *scarlet* and rich *bronze-purple* foliage | 3 | 0 |
| —**melancholicus ruber**, beautiful *blood-red* foliage, of resplendent beauty | 3 | 0 |
| —**salicifolius**, ribbon leaved | 2 | 0 |
| **Aralia Sieboldii**, very ornamental, with large leaves of a bright glossy *green* | 5 | 0 |
| **Beet, Chilian**, broad leaves, brilliantly coloured, varying from *white* to *blood-red* | 2 | 0 |
| „ **Black-leaved**, the most ornamental for flower garden decoration | 1 | 0 |
| **Canna aurantiaca**, *orange*, leaves lively *green* | 3 | 0 |
| —**discolor floribunda**, *scarlet-maroon* tinted foliage | 3 | 0 |
| —**Warscewiczii**, brilliant *red*, foliage striped | 3 | 0 |
| —**zebrina**, beautiful *striped* foliage | 5 | 0 |
| **Cannabis gigantea**, very ornamental. The Giant Hemp | 4 | 0 |
| **Centaurea candidissima**, splendid silvery-leaved plants | 1 | 0 |
| —**Clementei**, foliage elegant, covered with a *snowy-white* down | 1 | 0 |
| —**gymnocarpa**, a graceful silver-leaved variety | 1 | 0 |
| **Cerastium Biebersteinii**, a dwarf plant, with beautiful silvery-tinted foliage | 0 | 6 |
| —**tomentosum**, similar to the preceding, with smaller foliage | 0 | 6 |
| **Chamæpeuce Casabonæ**, glossy *dark-green* foliage *white* veins and spines | 3 | 0 |
| —**diacantha**, handsome foliage, with *white* ribs and spines | 3 | 0 |
| **Cineraria acanthifolia**, silvery leaves, beautifully cut like the Acanthus | 1 | 0 |
| —**maritima**, silvery-leaved variety, fine for bedding | 2 | 0 |
| **Daturas of Sorts**, noble plants with large trumpet leaves | 6 | 0 |
| **Echeveria metallica**, fine *light*, lustrous *bronze* foliage | 0 | 6 |
| —**secunda glauca**, *white*, fleshy foliage | 0 | 6 |
| **Eulalia Japonica Zebrina**, a Zebra-striped, reed-like grass | 2 | 0 |
| **Gynerium argenteun**, Pampas Grass, with palm-like plumes | 5 | 0 |
| **Humea elegans**, very graceful plant with feathery flowers and highly-scented foliage | 5 | 0 |
| **Nicotiana atropurpurea grandiflora**, large foliage, and *rosy-purple* flowers } varieties | 8 | 0 |
| —**macrophylla gigantea**, large leaves, *red-purple* flowers } of Tobacco | 10 | 0 |
| **Nicotiana affinis**, the pure white jessamine scented Tobacco | 1 | 0 |
| **Perilla Nankinensis**, *purple-bronze* foliage | 1 | 0 |
| **Phormium Tenax** (New Zealand Flax), a pretty, reed-like grass | 6 | 0 |
| **Ricinus communis macrophyllus**, very large leaves, *rosy* veins and stems } The Castor | 8 | 0 |
| —**purpureus**, fine dark foliage } Oil Tree | 6 | 0 |
| —**roseus magnificus**, dwarfy bushy habit, superb rose fruit } | 6 | 0 |
| **Salvia bicolor**, large silvery foliage | 2 | 0 |
| **Solanum acanthocarpum**, leaves silvery, spines *orange* | 6 | 0 |
| —**Capsicastrum**, orange-scarlet fruit | 1 | 0 |
| —**macrocarpum**, splendid foliage, large *purple* flowers | 6 | 0 |
| —**marginatum**, silvery foliage, edged with *white* | 4 | 0 |
| —**Warscewiczii**, robust habit, immense *deep-green* leaves | 6 | 0 |
| **Sorghum Saccharatum**, Chinese sugar-cane grass | 6 | 6 |
| **Wigandia caracassana**, a noble plant, with magnificent leaves | 4 | 6 |
| —**Vigieri**, leaves *bright-green* on the upper side and glaucous underneath | 4 | 0 |
| **Zea Japonica variegata** (Striped variegated Maize) | 2 | 0 |

# LAWNS.

If anything contributes to the beauty of the surroundings of an English country home, it is the smooth and perpetual greenness of the Lawn. Nothing is so striking and attractive to travellers visiting the shores of England, as the lovely verdant landscapes that meet the eye in every direction. All these advantages are brought about by the natural consequences of soft climatic influences, such as are unknown in India.

In the hill districts of India, we frequently hear of Lawns having been satisfactorily produced from English Seeds, and we know of no reason why the practice should not be more general. If sown during moist weather, the young grass will come up regularly and quickly, and if thoroughly well irrigated during the hot season, it should answer fairly well. In the parching temperature of the Central and Southern Provinces, the operation, except it be at some of the charming hill stations, will be a precarious one, unless a thorough preparation of soil and a constant system of renovation and irrigation is carried out.

At Bangalore, Ootacamund, Yercaud in the Shevaroy Hills, and on the Pulney Hills, beautiful Tennis Lawns are to be found, reminding one of what they are accustomed to see at home. The same may be said of the delightful resorts in the Himalayas; indeed, during the rainy and cold season grass plots seem to spring up everywhere, even the Stations in the burning plains vie with each other in patches of verdant greenness, which shoot forth with magic rapidity directly the thirsty soil has partaken of the slightest taste of rain.

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The culture of Dhoob Grass in the formation of Lawns, as successfully practised by the Superintendent of the Government Gardens, Allahabad:—

Towards the end of the hot season have the piece of ground to be covered, trenched to a depth of from two to three feet, digging a good supply of decayed manure at the bottom, level the surface, then give a good soaking of water, and level it up again if it sinks in,—after the first appearance of the rains, loosen the surface a little, and procure a supply of the grass-stems and roots—and cut them into pieces like coarse chaff; sow these evenly over the ground, and tread or press them lightly into the soil, then cover the whole with fine soil and sifted manure mixed, and press this again into a nice level; in a week or two the grass will show a green appearance, and a luxuriant crop will follow; the first growth should be allowed to run until it gets thick, when a cutting may be made for forage. The next cuttings is usually made with a tool like a large knife, which the Mali can soon be taught to use, or an English mowing machine will do the work. No matter how closely it is cut, the whole lawn will in a few days be covered with a beautiful emerald green, and if kept renovated occasionally with half-an-inch dressing of fine soil and manure, will be permanent and lasting; the object of the fine top dressing is to prevent the moisture from evaporating, and by this means support the grass through the hot season.

The Dhoob Grass grows wild in many parts of India, and can be collected for this purpose. It is not spoken well of by many writers, but I am convinced when its properties are better known, it will be largely adopted in the Plains in the formation of tropical Lawns. It is largely used in Central America for the purpose.

The following concise instructions may be of service to those enthusiastic gardeners who are inclined to make the attempt to form a Lawn as carried out in England.

**Preparation of the Ground.**—The ground should be thoroughly well dug two or three times, during which the operation of levelling is to be carefully attended to, as the appearance of the Lawn will be materially affected thereby. After digging, a heavy rake should be used, every lump of earth being well broken and every stone removed, so that at least two inches of fine earth is available on the surface. In the Plains it is recommended that the surface of the Lawn be sunk several inches below that of the surrounding level.

**Sowing the Seed.**—The Seed should be sown broadcast, and as evenly as possible, so that the soil may be perfectly covered; lightly raked and finally protected with a light dressing of leaf mould, dried grass, or thoroughly decayed manure, and in the Plains the whole should be covered with straw until the spears of the young grass are visible.

**Time of Sowing.**—*June* to *November* is the best time for sowing in the Plains. In the Hills sowings can be made from *March* to *October*, according to elevation, or at any period when moderate rains abound.

In the higher elevations in Ceylon English Grass Seeds have grown successfully when sown in *February*—and in the low country, they may be sown from *May* to *November*.

**After Management.**—Weeds should be removed on making their appearance, and the bare places re-sown with Seed, for which purpose a supply should be always on hand. The young grass should be mown 3 times with a scythe, and the mowing machine may then be used. Frequent rolling is necessary. A firm tread on the surface is always desirable and this is readily perceived by walking on the Turf. The Lawn should be well watered in the evening in hot dry weather, and during such weather too close mowing should be avoided.

Messrs. Ransomes' mowing machines have been used in India upon all kinds of grass with great success.

**Cricket Grounds, Lawn Tennis, Croquet Grounds, &c.**—The preparation of the soil is as already described, and for each purpose a special mixture of Seed is prepared. The quantity required per Acre is 4 Bushels to form a new turf, or 1 to 2 Bushels to renovate. To form a tennis-lawn of the regulation size (seventy-eight feet by thirty-six feet, together with a margin for running back) it would be desirable to have a bushel of Seed, which would allow for a good seeding, and also provide a little for making good any weak places.

# THE ROSE.

The Queen of Flowers is a great favourite in all parts of the world, and its connections with various traditions is naturally as marked as is its place in poetry and literature. To ancient writers, it appears as the emblem of all that is lovely and bright, and many are the happy and expressive passages from poets, preachers, and other authors, who have taken the Rose as typifying the height of beauty and elegance of the Flowers of this earth. The Rose is seen in most parts of India, the old-fashioned varieties as they are called in England, being quite favourites, indeed, many of them may be aptly termed real natives. At Allahabad the beautiful Marechal Neil and the leading Hybrid Perpetual varieties flourish luxuriantly in the Government Gardens. It was from India that we get the story relating to the first discovery of the method of preparing the scent, well known as Otto of Roses. It is said a favourite Sultana of the voluptuous Jehanghir caused his bath in the palace garden to be filled with Rose leaves; the action of the sun soon concentrated the oily particles which found their way to the surface, and bursting, emitted such a delightful odour, that suggested the idea of preparing this beautiful perfume. Every enthusiast in gardening delights to cultivate a few of the kinds that grow to such perfection in England, that they may be reminded of their custom at home, where an abundance of this ever-popular Flower was always to be obtained.

There is no trouble in getting Roses out from England in October and November for Central and Southern India, and January or February for the Hills. The Dwarfs or Bushes are recommended to grafted or Standard Trees, they not only bear the journey better, but seem to be less affected by the great change in climate, than do those that are budded on the briar stem.

Any good loamy soil suits the Rose, and it can hardly be too rich. They generally bloom the second season after being planted out, if liberally treated, while flowering a good watering once a week with liquid manure (cow dung) is recommended; the blooms also that are not cut should be taken away directly they commence to fade. Protect from high winds, and prune closely. To get rid of blight and other insect pests, syringe the foliage with soapsuds and Parafin water mixed; feed the roots with plenty of stable manure after the flowering period is over. The Moss Rose and Sweet Briar also does well in India under similar treatment, and nearly all varieties of the Rose will flourish up to an altitude of 10,000 feet.

It is not thought to be of any advantage to give the names of the various groups, suffice it here to say, that intending purchasers of either Teas, Hybrid Perpetuals, Niosette, Bourbon, or Persian varieties, may depend upon receiving a good selection in each class if trusting their orders to the care of a responsible House. The Hybrid kinds seem the least successful in the burning Plains.

## ENGLISH BULBS.

The Hyacinth and Tulip, as displayed in the great Parks and Public Gardens of London, is a sight once seen by visitors never to be forgotten, and it is a wonder more attention has not been given to the cultivation of this class of bulbous plants in India. This is probably owing to an idea that they are unsuitable and will not grow. No doubt in the South and on the Plains there are many difficulties to encounter, but I know of no reason why they should not succeed in the Hills of the upper provinces and similar pleasant locations in Bombay, the Deccan, Madras, and Ceylon.

The Narcissus and Daffodil, Snowdrop, Jonquil, Crocus, Anemone, Iris, Ranunculus, Aconite, Ixia, Lily, Tigridia, Amaryllis, Freesia and many other Bulbs might, in my opinion, be grown successfully in some localities.

The best soil for their culture in pots is one-half sand, the remainder loam, leaf mould and decayed dung in equal proportions. Keep in the dark until they start and water sparingly. In the open ground they prefer shady places, put in three to five inches deep, according to the size of the bulb. They must be obtained from England in September as they are not in a fit condition to pack before that month. Lilies are not ready until about November.

The beautiful Caladiums, Hemerocallis, Gladiolus, Achimenes, Gesnerias, Tydeas, Gloxinias, Tuberose, Oxalis, and Begonias are already established favourites in all parts, and it is not surprising that the demand from India for these charming tuberous rooted plants should be so great, when we find they are so easily cultivated. The best time to get these bulbs out from England is from October to January, some being ready earlier than others.

## ENGLISH FRUITS.

The cultivation of English Fruit Trees is a precarious operation in India. Although we hear from time to time of satisfactory results, especially in the Northern districts and Hill stations, the majority are however of little or no use in the Plains.

October and November are the best months for getting English Fruits in trees, or trained bushes, out from England for the Central and Southern parts of India. January to March for the Punjaub and North generally—they arrive then in time for planting, and get somewhat established before the hot season sets in. The Apple, Pear, Plum, Apricot, Peach and Nectarine will do fairly well in favoured localities in the Hills, and are worth a more extended trial in these districts.

The Fig and Grape will also do well in most parts and bear heavy crops. The Strawberry and Raspberry may be tried in the Hills. As far as information can be gathered, success has not to a very great extent favoured the cultivation of the Gooseberry and Currant, and it remains for some enthusiast in the highly elevated Hills, such as Darjeeling, or other pleasant resorts, to bring these Fruits to perfection in India. Seeds of all Fruits may be sown early in the rains.

# ON MANURES, WATERING, VERMIN, &c.

Universal experience shows that both Animal and Vegetable substances are consumed in the soil, and by this means Vegetation gets nourished with such materials as are necessary to their well being. In India, where planting operations are conducted under conditions demanding fair cultivation, it becomes a matter of necessity that manure be employed in order to maintain the fertility of the soil; added to this, the action of heavy rains, and of the solar rays, at all times very great, causing a rapid waste of productive power. The question for solution is as to the proper description of fertilisers to be used to ensure continual crops. Fish, bones, nightsoil, soot, lime, stabledung and dead leaves, are all powerful stimulators, and can be readily incorporated when dug in. Charcoal and petroleum or paraffin too are becoming largely employed with advantage. This latter mineral is now being produced in large quantities from wells that have been discovered in several parts of India, and a few remarks as to its usefulness may not be out of place. It has proved to be one of the best remedies in preserving Seeds sown in the open ground against the ravages of birds and insects. If Peas are soaked in it 5 minutes before sowing, it will check grubs and wireworm—which are a great nuisance in some gardens—and many other pests; and even when the Peas are through the ground, the vermin seem to have an aversion to the young leaves, and generally leave them alone. Radishes, and all members of the Cabbage tribe, may with safety be steeped a few minutes in it before sowing.

Then, again, those who cannot grow Onions on account of the ravages of the Onion-fly, may easily do so by steeping the Seeds a minute or two before sowing, and after they are through the ground watering them overhead with a mixture of paraffin and water. Add a tea-cupful of paraffin to a four-gallon can of water, with the addition of a little soft soap to cause the oil to mix. Or if the oil is put with some milk first, it will mix more readily, be sure that it is thoroughly well incorporated before application. The same treatment will also hold good with regard to Carrots and Turnips.

Where Fruit Trees or Roses are infested with scale or green fly, a mixture of paraffin and water should be made double the strength recommended for Onions, and the trees well syringed in the evening. This will be found to be one of the best means of cleansing them. For the destruction of blight, perhaps the best way to apply the oil is by means of a stiff brush, using but little, and rubbing it well into the crevices of the bark where the blight has affected the trees. As an insecticide for soft-wooded plants, it is well to caution beginners not to use it stronger than advised above. Syringe the solution well over and under the plants and wash it off with clean water about an hour afterwards. As a powder, it can be used to prevent the ravages of the dreaded ants, mixed with some river sand or porous soil, and allowed to dry in the sun; this can then be re-mixed with more dry sand and sprinkled under the growth of Cucumbers, Melons, and such like plants, and the rats and mice, beetles and other insects will be checked in their depredations. Wood Ashes are also useful for this purpose.

In watering plants in pots or boxes with liquid manure or artificial invigorators such as Guano or the prepared Fertilizers, the dressing should not be given more often than once a fortnight. To plants in the open ground, a system of watering by means of irrigating channels is followed generally throughout India; indeed, without some assistance in this way many of the English Vegetables and Flowers would never survive the hot season, particularly on the thirsty Plains.

Artificial manures, when applied in a dry state to the garden, should be used only in damp weather. They can be given in a liquid state at any time, when the plant is in good health, at the rate of a teaspoonful to a gallon of water.

Indian Bone meal is a commodity now being largely manufactured in Calcutta, Bombay, and Karachi, and it is very useful for gardening purposes, whether dug into the ground, or applied as a top dressing. It acts as a real food, and is not merely a stimulant, and as a safe all-round enricher of the soil its adoption is recommended, for if put in too heavily it will not burn the plant or exhaust the soil like many of the mineral manures. Four cwt. per acre is an average quantity to use, a handful is sufficient to mix with a gallon of water, or if applied dry, a pinch to a pot is quite enough.

It is an advantage when the water is drawn from a well to keep it standing some hours in an open receptacle before using, because the fact of its being charged more or less with substances not suited to the requirements of plants renders it advisable to remove the objection, either by the action of the sun and air, or in the form of sediment.

In hot and dry weather, irrigate all growing crops on alternate days; carry out the operation thoroughly or it will be of no service; see that the ground is well loosened to enable the water to penetrate into the soil and not run away on the surface; the evening is the best time to water. Plants that are in bloom should not be showered overhead as it spoils the colour of the flowers. Employ the services of a youth to keep away the birds from growing and fruiting crops; keep his stomach well filled or he will do more damage than they can possibly commit. Stretches of black cotton about two feet apart and one foot from the ground, is a good preventative against small birds picking the seeds out of beds.

All wooden trellis or stakes will require to be soaked in paraffin before use, or the white ant will soon render them useless.

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## FERTILIZING FLOWERS.

To ensure success in the cultivation of English Cucumbers, Melons, and Vegetable Marrows in most parts of India, it is an advantage to artificially fertilize the fruiting blooms. It will be noticed that these plants bear both male and female blossoms—the latter can be distinguished by the semblance of a small fruit between the flower and its stem—the best way to carry out the impregnating operation is to get a small paint brush and introduce it into the male bloom, when a quantity of yellow powder, called pollen, will adhere to it; this should be carefully brushed into the centre of the female flower, and it will greatly assist in bringing the fruit to perfection. When once this bloom has been impregnated, it will need no further care.

# ENGLISH SEEDS, AND HOW TO TREAT THEM.

For successful Gardening in India, it is of special importance that the Seeds sown be of the freshest and best description, and to attain this end, there is no plan better than to rely upon some respectable House for the supply. Until within the past decade the demand for English Seeds in India has been very uncertain. Seeing that a large and influential business must arise when it once became known that reliable and tested Seeds were to be obtained, the best firms made special arrangements for the cultivation, drying, and packing of such Seeds as are adapted to the various climates, and now a very extensive trade is conducted between these Houses and by many of the leading Indian Merchants who import varied assortments of the best brands at certain seasons of the year with general success.

Storing Seed in India is a point of the greatest importance, and it is recommended that English Seeds be put into the ground immediately they are received, but this is not always practicable. It is, however, strongly urged that the packets are kept closed, and these again laid in the package in which they arrived, or perhaps the best storage of all is a drawer, or series of drawers, lined with flannel or similar material, in a room that is kept tolerably dry, and at an average temperature at all times. If damp and humid many of them will suffer severely from affections that will quickly destroy all vitality, and a very dry atmosphere, though decidedly preferable to a moist one, is also to some extent prejudicial.

In the shipment of English Seeds to India, the Seedsman has to contend with great difficulties as soon as the tropics are reached, what with the change of climate and the great heat, the Seeds sometimes begin to "sweat" and, remaining under these unnatural conditions for a time, the germinating properties are more or less impaired, and the supplier is blamed for sending seeds that will not grow, when really the damage has been brought about by circumstances quite beyond control.

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## RAISING SEEDS IN HEAT.

**Hot-Beds.**—It is an assistance to delicate plants to raise the seedlings in covered frames on dung-heaps—Melons and Cucumbers are easier sprouted by this means. The dung should be allowed to ferment and cool down to 70 to 90 degrees. Lay an inch of wood ashes on the surface, and stand the pots or boxes on this. Be careful not to put them in too soon, or the heat will burn them up. If you know of a professional gardener near, get him to raise these tender plants for you.

The natives in some parts of India sprout the common Cucumbers and Gourds by placing the seed in damp cloth and burying it in a heap of warm wood ashes. They make it answer, but it is a precarious operation.

# ON THE CLIMATES AND PHYSICAL FEATURES OF INDIA.

Many may think and talk of India as if it were comparatively a small country, whereas, in dimensions, it is more like a Continent, being in territorial extent the size of Europe, taking away Russia, while there is not on the face of the earth a Continent, which in its climate or its soil, more heterogeneous; in both these respects it exhibits almost endless diversities. Here we have specimens of every climate to be met with between the Equator and the poles. Here we find examples of nearly all the soils on the face of the globe, from the rich and inexhaustible alluvial deposits of Bengal to the arid sands and deserts that abut upon the Indus. Here we have all kinds of products, of plants, trees and verdure, and in some parts no products at all.

In the extreme South, and along the hill ranges, there are majestic forests which, for stateliness and sublimity, baffle all description, while in the regions to the north of the Indus there is in parts not the smallest trace of vegetation. The deltas of some of the great rivers are fast becoming the granaries of the world. In many places as much rain falls in three months as in England for ten years, and in other parts scarcely any rain falls at all.

The climate of India is still more varied than the features of the country, the temperature differs extremely according to latitude and elevation, as a result of this the productions of the different regions presents the most striking contrast. In many parts of Bengal and in the North-West Provinces, famines occur at intervals, whilst on the moist alluvial plains food products are superabundant: this is notably the case in the fertile table-lands of the Deccan in the Eastern part of the Bombay Presidency, where most luxuriant crops are produced almost independent of the seasons.

The atmospheric conditions of India may be classed under three heads which are known as cold, hot, and wet.

The cold season in Northern India commences with the North-East Monsoon, which generally begins in November and lasts until March. This is succeeded by the South-West Monsoon which, blowing the opposite way, ushers in the hot season. This continues until the middle of June, when, although the wind usually keeps in the same direction, the rainy season sets in, with abundance of foul weather, and lasts until October.

In the Hills of the Punjaub the seasons are somewhat like they are in more temperate regions, that is to say, the winter commences about October and lasts until April, when the hot season comes in followed in turn by the rains.

In Southern India, to commence from November, we find ourselves at the end of a season of generally boisterous and wet weather, the North-East Monsoon raging with great vigour, bringing plenty of fog and

humidity in the plains, and these conditions are likely to continue until December is well in when they change for the better. January and February are generally calm and clear, with no rain, but heavy dews; this continues through March and April when a little rain may be expected, which restores vigour to all vegetation parched up by the great heat previously prevailing. May and June are extremely hot. July sees the commencement of the South-West Monsoon which brings more rain, and this lasts more or less through August, to the early part of November.

## THE SOILS OF INDIA,

### AND THEIR ADAPTABILITY TO THE FORMATION OF GARDEN GROUND.

In the extreme North of the Punjaub, approaching the Himalayan Range, the geological formation consists generally of granite and other solid rocks, surfaced with limestone and sandstone, which again carries in places a very dark and useful soil for ordinary cultivation. This is the one kind of soil to which preference is given when it is available; it closely resembles the black earth of Southern Russia and the prairie soil of America. In some parts of India vast plains are covered by this soil, and it is generally productive. Such soils usually are deep and uniform in character, and contain a fair proportion of clay and organic matter. They all possess one very valuable characteristic in their retentiveness, a most important feature in a soil in a tropical country with irregular rainfall; and it is a very remarkable fact that in India these black soils are usually met with only in those parts where the rainfall is uncertain.

In the North-West extensive tracts are found of a rocky formation, the greater portion is however covered with wood and jungle; both Vegetables and Flowers do exceedingly well in Scinde and the Hill regions.

In Bengal, the Eastern Division, is traversed by two great rivers which divide into numerous branches before reaching the sea, and their united deltas form an immense tract of rich alluvial soil. The surface of the Presidency generally exhibits a deep clay alluvium, interspersed with sandy tracts in the Western Division, and deposits of a red soil in some localities. This formation favours cultivation.

In Central and Southern India Gardening is rendered difficult in many parts owing to the poorness and dryness of the sandy soil that abounds. The Red Soils in the Bombay district and the Black Soil of the Table-lands of the Deccan, however, are a notable exception: here we find a very rich and fertile stretch which, when well worked, produces crops of the finest description.

It is a matter of regret that the formation of the soil in many parts of the plains of Southern India is in general of such a nature as to preclude all possibility of systematic cultivation; these obstacles have however been overcome in places by a thorough system of artificial irrigation, and the

uses of manures and other material for giving the soil the food properties that plants require, and there is no doubt that with attention and fairly-directed skill, Vegetables and Flowers may be produced to please the most fastidious. In the lovely Hill Stations and other pleasant resorts in Madras, gardening is carried on with much vigour, and dainty products flourish luxuriantly.

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## THE VEGETABLE GARDEN.

There is no doubt that a piece of ground lying on a slope is the best position for all gardening purposes in India. If it faces a direction from North-East to South-East so much the better. Care should be taken to shelter the cultivated parts as much as possible with tall and strong-growing trees or shrubs, such as may be found to do well in the district, to assist in protecting the crops from the fierce winds that prevail at times. A good supply of water, too, is an important factor in ensuring success—without its aid no vegetables will thrive in the hot and thirsty seasons.

Assuming that the soil has been dug, ridged, and exposed to the influence of the sun, the beds must next be formed that are to receive the Seeds or transplanted seedlings, as the case may be. For seed-beds they should be small, with a space between each to enable any part being reached with the hand; for sowing in drills or rows the "break" or piece of ground can extend from walk to walk across the garden. For early crops, the beds should be raised or sloped to run excessive rains off, but for those kinds that are put in when the rains are over, the beds can be made a little lower than the surrounding ground. It is always safest to arrange seed-beds so that they can be covered conveniently if a very wet time sets in, and sowing in lines is preferable to broadcast.

A writer on Indian Gardening in the Punjab says:—"All ground, either for the cultivation of flowers or vegetables, must be almost level, with a slight fall on the inner side, and a free outlet for the surface-water."

Firminger advises, for Bengal and Upper India, "That the footpaths be raised five or six inches above the level of the borders, the water from the well being conveyed on each side by channels of soil beaten firm, a little above the level of the border. The paths should be wide enough for two to walk abreast."

Another writer in the South says:—"The modes adopted for planting are various. Some plant on elevated ridges, others in furrows, and some in level beds; but the best plan is to lay out in beds, four feet broad, with a well-beaten ridge, one foot in breadth, along the sides and ends. It is a saving of space, and easily irrigated."

Ferguson, on Gardening in Ceylon, says: "The Kitchen Garden should be formed in a flat and well-sheltered situation. Dig over the soil as often as possible; then level and lay out the beds and commence planting. For the Flower Garden no arbitrary rule can be laid down. Shelter is very important, and all beds should be raised six inches or so above the level. It is an advantage to have the ground thoroughly drained."

# THE ROTATION OF CROPS IN THE VEGETABLE GARDEN.

Some system of a rotation of crops is regarded as absolutely essential to a satisfactory result. But though the importance of the principle is acknowledged it might be much more carefully studied with advantage. It is hardly within our province to go into the why and wherefore of the necessity for a frequent change of crops, or what comes to precisely the same thing—change of soil; suffice it to say that it is simply a matter of chemistry as a rule, and arises from the fact of almost every class of plant requiring and extracting from the soil—so long as it is to be had—a different or at any rate differently proportioned set of principles or chemical constituents. Given this change, the fresh crop finds abundance of the substances for which it craves, and which the previous occupants, only requiring these in very small quantities, if at all, have consequently left almost undiminished.

| Principal Crop. | Crops it may follow. | Crops that may not come before or after it. | Crops it may be followed by. | Plant between the rows. |
|---|---|---|---|---|
| Beans, Broad. | Kale, Broccoli, Cabbage, Parsnip, Carrot, Potatoes. | Leguminous plants of its own natural order, *i.e.*, Peas, &c. | Celery, Leek, Lettuce, Turnip, and any of the Cabbage tribe. | Kale, Brussels Sprouts. |
| Beet. | Cabbage tribe, and any crops but those specified in next column. | Spinach, Turnip, Parsnip, Carrots, Salsafy, and Scorzonera. | Pea, Bean, Cabbage, Cauliflower, Lettuce. | Salad Plants. |
| Kale, Borecole, and Brussels Sprouts. | Pea, Bean, Lettuce, Potatoe. | Cruciferous plants of own order, *i.e.*, any of Cabbage tribe, Turnip, &c. | Pea, Bean, Beet, Carrot, Parsnip, Onion, Potatoe, Kidney Beans. | Bean and Salad Plants. |
| Broccoli. | Pea, Bean, Kidney Bean. | Cruciferous plants of own natural order. | Any crop that can be sown or planted when cleared off. | Salad Plants. |
| Cabbage. | Pea, Bean, Kidney Bean, Potatoe, Lettuce, Onion, Leek, Celery, &c. | Cruciferous plants of own natural order. | Pea, Bean, Kidney Bean, Potatoe, Lettuce, Celery, Carrot, Parsnip, Beet, Salsafy, &c. | Bean, Spinach. |
| Carrot and Parsnip. | Any crops except those in next column. | Any crops except root crops and umbelliferous plants, as Celery, Parsley, &c. | Any crops except those in last column. | Salad Plants. |

## THE ROTATION OF CROPS IN THE VEGETABLE GARDEN.—(*Continued*).

| PRINCIPAL CROPS | CROPS IT MAY FOLLOW. | CROPS THAT MAY NOT COME BEFORE OR AFTER IT. | CROPS IT MAY BE FOLLOWED BY. | PLANT BETWEEN THE ROWS. |
|---|---|---|---|---|
| Cauliflower. | Pea, Bean, Potatoe, Celery, Kidney Bean, Onion, Carrot, Lettuce, Beet. | Cruciferous plants of own natural order. | Pea, Bean, Potatoe, Celery, Kidney Bean, Onion, Carrot, Lettuce, Beet. | Spinach, Lettuce, Endive. |
| Celery. | Any crop except those in next column. | Parsnip, Carrot, Parsley. | Pea, Bean, Kidney Bean, Potatoe, Turnip, and any of the Cabbage tribe. | Lettuce, Endive, and other Salad Plants. |
| Endive and Lettuce. | Potatoe, Pea, Bean, and any of the Cabbage tribe. | Chicory, Salsafy, Scorzonera, artichoke, Cardoon, &c. | Any crop suitable for borders. | Nothing. |
| Kidney Bean, and Pea. | Potatoe, Carrot, Parsnip, Turnip, Broccoli, and any of the Cabbage tribe. | Bean and leguminous plants of own natural order. | Broccoli, Cabbage of any kind, Spinach, Turnip, late Celery. | Salad Plants and Spinach. |
| Leek, Onion, Shallot, &c. | Cabbage tribe, Celery, Potatoe, Pea, Bean, Kidney Bean, Lettuce, Endive, Spinach. | Garlic, Chives, and any crop of alliaceous nature. | Cabbage and Colewort. | Nothing. |
| Potatoe. | Any crop except those specified in the next column. | Carrot, Parsnip, Beet, Salsafy, Scorzonera. | Any crop requiring loose, clean, well-worked soil, and all cruciferous plants. | Brussels Sprouts, Broccoli, Celery. |
| Seakale. | Potatoe, Pea, Bean, Carrot, Parsnip, Beet, Celery, &c. | Cruciferous plants of own natural order. | Potatoe, Pea, Bean, Carrot, Parsnip, Beet, Celery, &c. | Nothing. |
| Spinach. | Pea, Bean, Kidney Bean, Cabbage, Cauliflower, Lettuce, &c. | Beet. | Pea, Bean, Kidney Bean, Cabbage, Cauliflower, Lettuce, &c. | Nothing. |
| Turnip, Swedes, and Kohl Rabi. | Potatoe, Spinach, Pea, Bean, Lettuce, &c. | Cruciferous plants of own natural order. | Potatoe, Spinach, Pea, Bean, Lettuce, &c. | Nothing. |

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Digitized with financial assistance from the
Government of Maharashtra
on 05 October, 2018